National Library of Canada
Bibliothèque nationale du Canada

Canadian Theses Service
Services des thèses canadiennes

Ottawa, Canada
K1A 0N4

CANADIAN THESES
THÈSES CANADIENNES

NOTICE

The quality of this microfiche is heavily dependent upon the quality of the original thesis submitted for microfilming. Every effort has been made to ensure the highest quality of reproduction possible.

If pages are missing, contact the university which granted the degree.

Some pages may have indistinct print especially if the original pages were typed with a poor typewriter ribbon or if the university sent us an inferior photocopy.

Previously copyrighted materials (journal articles, published tests, etc.) are not filmed.

Reproduction in full or in part of this film is governed by the Canadian Copyright Act, R.S.C. 1970, c. C-30. Please read the authorization forms which accompany this thesis.

AVIS

La qualité de cette microfiche dépend grandement de la qualité de la thèse soumise au microfilmage. Nous avons tout fait pour assurer une qualité supérieure de reproduction.

S'il manque des pages, veuillez communiquer avec l'université qui a conféré le grade.

La qualité d'impression de certaines pages peut laisser à désirer, surtout si les pages originales ont été dactylographiées à l'aide d'un ruban usé ou si l'université nous a fait parvenir une photocopie de qualité inférieure.

Les documents qui font déjà l'objet d'un droit d'auteur (articles de revue, examens publiés, etc.) ne sont pas microfilmés.

La reproduction, même partielle, de ce microfilm est soumise à la Loi canadienne sur le droit d'auteur, SRC 1970, c. C-30. Veuillez prendre connaissance des formules d'autorisation qui accompagnent cette thèse.

THIS DISSERTATION
HAS BEEN MICROFILMED
EXACTLY AS RECEIVED

LA THÈSE A ÉTÉ
MICROFILMÉE TELLE QUE
NOUS L'AVONS REÇUE

NL 339 (r. 86/01)

Canada

248

0-315-26979-0

National Library of Canada | Bibliothèque nationale du Canada

Canadian Theses Division | Division des thèses canadiennes

Ottawa, Canada
K1A 0N4

PERMISSION TO MICROFILM — AUTORISATION DE MICROFILMER

• Please print or type — Écrire en lettres moulées ou dactylographier

Full Name of Author — Nom complet de l'auteur

HAFIZA KHATUN

Date of Birth — Date de naissance	Country of Birth — Lieu de naissance
12/07/~~54~~ 1954	BANGLADESH

Permanent Address — Résidence fixe

37, Haji Abdullah Sarkar Lane Bangshal, Dhaka-1. Bangladesh

Title of Thesis — Titre de la thèse

INTRA-URBAN RESIDENTIAL MIGRATION OF EAST INDIAN PEOPLE IN EDMONTON

University — Université

UNIVERSITY OF ALBERTA

Degree for which thesis was presented — Grade pour lequel cette thèse fut présentée

M.A

Year this degree conferred — Année d'obtention de ce grade	Name of Supervisor — Nom du directeur de thèse
Spring - 1984	Dr K. J. Fairbairn

Permission is hereby granted to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

L'autorisation est, par la présente, accordée à la BIBLIOTHÈQUE NATIONALE DU CANADA de microfilmer cette thèse et de prêter ou de vendre des exemplaires du film.

L'auteur se réserve les autres droits de publication; ni la thèse ni de longs extraits de celle-ci ne doivent être imprimés ou autrement reproduits sans l'autorisation écrite de l'auteur.

Date	Signature
January 25, 1984	Hafiza Khatun

NL-91 (4/77)

THE UNIVERSITY OF ALBERTA

INTRA-URBAN RESIDENTIAL MIGRATION OF EAST INDIAN PEOPLE IN EDMONTON

by

© HAFIZA KHATUN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF ARTS

DEPARTMENT OF GEOGRAPHY

EDMONTON, ALBERTA

SPRING 1984

THE UNIVERSITY OF ALBERTA

RELEASE FORM

NAME OF AUTHOR HAFIZA KHATUN

TITLE OF THESIS INTRA-URBAN RESIDENTIAL MIGRATION OF EAST INDIAN PEOPLE IN EDMONTON

DEGREE FOR WHICH THESIS WAS PRESENTED MASTER OF ARTS

YEAR THIS DEGREE GRANTED SPRING 1984

Permission is hereby granted to THE UNIVERSITY OF ALBERTA LIBRARY to reproduce single copies of this thesis and to lend or sell such copies for private, scholarly or scientific research purposes only.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

(SIGNED) ....Hafiza Khatun.

PERMANENT ADDRESS:

37, Haji Abdullah Sarker

Lane, Bangshal, Dhaka-1

Bangladesh

DATED ....January 25....1984

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled INTRA-URBAN RESIDENTIAL MIGRATION OF EAST INDIAN PEOPLE IN EDMONTON submitted by HAFIZA KHATUN in partial fulfilment of the requirements for the degree of MASTER OF ARTS.

.....

Supervisor

.....

.....

Date... Jan 25 1984 .....

ABSTRACT

This thesis examines selected aspects of the spatial dimensions, demographic and socio-economic characteristics and the causal factors of the intra-urban migration of East Indian households in Edmonton. As the migration pattern of North American city dwellers is closely associated with the household's stages of life-cycle, the principal purpose of this study is to investigate whether or not the intra-urban residential migration pattern of the East Indian households relates to the life-cycle model.

The sample population consists of 152 households which have changed their residence since their arrival in Edmonton. The country of birth of the head of these households is India, Pakistan, Srilanka and Bangladesh. Only the mobility pattern of the last move of the sample households is considered for this study irrespective of the time of move. Data for the study were obtained through a self-administered questionnaire survey.

The study shows that the intra-urban migration of East Indian households is strongly associated with the stages of the life-cycle. The study reveals that the sample population had their highest rates of mobility immediately after a change in household structure. It is also evident from this study that inadequate living space is the principal push factor and economic reasons are the principal pull factors for the moves. As a consequence, most moves were away from the city centre.

ACKNOWLEDGEMENTS

I wish to express my sincere gratitude to my thesis supervisor Dr. K. J. Fairbairn, for his incredible patience and helpful guidance throughout the writing of this thesis. I also thank Dr. Johnson and Dr.Kennedy for their participation as members of my examining committee.

Several other persons in the Department of Geography made important contributions to the study. An imperfect memory prevents me from listing all their names, but this in no way detracts from the value of their contributions. Others to whom thanks are due include my brother Dr. A.F. Muhammad and those persons whose friendship was especially appreciated, Emma, Kimm, Don, Andy, Marziya and Tani. Above all, I would like to thank my husband Md. Hazrat Ali for his encouragement while I was writing this thesis. Finally, the cooperation and prompt response that I received from the executive members of the East Indian Associations in Edmonton, as well as my respondents, is deeply appreciated.

Table of Contents

Chapter — Page

1. INTRODUCTION 1

1.1 URBANIZATION IN CANADA 1

1.2 GENERAL ASPECTS OF THE RESIDENTIAL DIFFERENTIATION IN CITIES 5

1.3 THE CLUSTERING OF MIGRANTS AND MINORITY GROUPS ..8

1.4 WHY IMMIGRANTS MOVE? 12

1.5 INTRA-URBAN MIGRATION 15

1.5.1 Definition 15

1.5.2 Causal Factors 16

1.5.3 The Impact of Intra-urban Migration on the City Structure 20

1.6 SUMMARY 22

1.7 THE STATEMENT OF THE PROBLEM 25

1.8 PLAN OF THE INVESTIGATION 26

2. EAST INDIANS IN CANADIAN CITIES 29

2.1 DEFINITION OF EAST INDIANS 30

2.2 THE HISTORICAL BACKGROUND 31

2.3 DEMOGRAPHIC CHARACTERISTICS 35

2.3.1 Age 36

2.3.2 Sex 36

2.3.3 Marital Status 38

2.3.4 Family Structure 39

2.4 SOCIO-ECONOMIC CHARACTERISTICS 40

2.4.1 Educational Background 40

2.4.2 Occupation 42

2.4.3 Income 46

2.4.4 Social Network and Institution 48

2.4.5 Housing 50
2.4.6 Geographical Distribution 52
2.5 EAST INDIANS IN EDMONTON 54
2.6 SUMMARY 62
3. INTRA-URBAN RESIDENTIAL MIGRATION 66
3.1 THE FAMILY LIFE-CYCLE 67
3.1.1 1. Marriage Stage and 2. Pre-child Stage .72
3.1.2 3. Child-bearing Stage 72
3.1.3 4. Child-rearing Stage 73
3.1.4 5. Child-launching Stage 73
3.1.5 6. Post-child Stage 74
3.1.6 7. Later-life Stage 74
3.2 WHO MOVES? 75
3.3 WHY DO PEOPLE MOVE? 79
3.4 WHERE DO THEY MOVE? 83
3.5 SUMMARY 86
3.6 RESEARCH EXPECTATIONS 87
4. METHODS AND DATA 89
4.1 STUDY AREA AND RESOURCES 89
4.2 SURVEY METHODS USED 90
4.3 VARIABLES 91
4.4 THE SAMPLE 93
4.5 METHOD OF ANALYSIS 96
4.6 LIMITATIONS OF THE STUDY 100
5. SPATIAL DIMENSIONS OF INTRA-URBAN MIGRATION FLOW ..102
5.1 AREAL VARIATION OF THE EAST INDIAN HOUSEHOLDS BEFORE AND AFTER THE MOVE 102

5.2 DIRECTION OF THE MOVE 107

5.3 DISTANCE OF THE MOVE 112

5.4 TIME OF MOVE 116

5.5 SUMMARY 118

6. DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS OF THE EAST INDIAN MOVERS IN EDMONTON 121

6.1 DEMOGRAPHIC CHARACTERISTICS 121

6.1.1 Age 122

6.1.2 Sex 125

6.1.3 Marital Status 128

6.1.4 Household Size 130

6.2 SOCIO-ECONOMIC CHARACTERISTICS 132

6.2.1 Tenure Status 132

6.2.2 Dwelling Unit 134

6.2.3 Occupational Status 136

6.2.4 Other Factors 139

6.3 SUMMARY 142

7. THE REASONS FOR MOVING AND SELECTING A DESTINATION 145

7.1 THE FACTORS CAUSING A CHANGE OF RESIDENCE 146

7.1.1 Dwelling Space 147

7.1.2 Ownership Aspirations 149

7.1.3 Proximity to School and Work 150

7.1.4 Complaints About the Neighborhood 151

7.1.5 Economic Reasons 152

7.1.6 Remaining Factors 153

7.2 REASONS FOR THE SELECTION OF THE DESTINATION ..154

7.2.1 Economic Reasons 155

7.2.2 Dwelling Space 158

7.2.3 Characteristics of the Neighborhood 159

7.2.4 Proximity to Work and School 159

7.2.5 New House 160

7.2.6 Other Factors 161

7.3 SUMMARY 161

8. RELATIONSHIP BETWEEN THE MOVE AND HOUSEHOLD STRUCTURE OF THE EAST INDIANS IN EDMONTON 164

8.1 YEAR OF MOVE AND HOUSEHOLD FORMATION 165

8.2 YEAR OF MOVE AND BIRTH OF THE FIRST CHILD OF THE FAMILY 168

8.3 YEAR OF MOVE AND BIRTH OF THE LAST CHILD OF THE FAMILY 171

8.4 YEAR OF MOVE AND ARRIVAL OF FEMALE SPOUSE IN EDMONTON 175

8.5 SUMMARY 178

9. CONCLUSION 180

9.1 WHERE DID THEY MOVE? 180

9.2 WHO MOVED? 182

9.3 WHY DID THEY MOVE? 183

9.4 RELATIONSHIP BETWEEN THE MOVE AND CHANGE OF HOUSEHOLD STRUCTURE (LIFE-CYCLE) 186

9.5 SUGGESTIONS FOR FUTURE RESEARCH 188

BIBLIOGRAPHY 192

10. APPENDIX A 199

11. APPENDIX B 203

List of Tables

Table		Page
3.1	TAXONOMIES OF THE HOUSEHOLD LIFE-CYCLE	68
3.2	HOUSING NEED/ASPIRATIONS ASSOCIATED WITH DIFFERENT STAGES OF THE LIFE-CYCLE	71
4.1	SAMPLE SIZE OF THE EAST INDIANS	95
5.1	CONCENTRIC VARIATION OF DIRECTION OF THE MOVE	109
5.2	FREQUENCY DISTRIBUTION OF THE EAST INDIAN HOUSEHOLDS IN EDMONTON BY LENGTH OF STAY IN THE PRESENT RESIDENCE	117
6.1	AGE DISTRIBUTION OF THE ELDEST CHILD IN THE FAMILY	126
6.2	AGE DISTRIBUTION OF THE YOUNGEST CHILD IN THE FAMILY	127
6.3	LENGTH OF MARRIAGE OF EAST INDIAN MOVERS IN EDMONTON	129
6.4	HOUSEHOLD SIZE OF THE EAST INDIAN MOVERS IN EDMONTON	131
6.5	TENURE STATUS OF THE EAST INDIAN MOVERS IN EDMONTON	133
6.6	TYPE OF DWELLING UNIT OCCUPIED BY THE EAST INDIAN MOVERS IN EDMONTON, BEFORE AND AFTER THE MOVE	135
6.7	OCCUPATIONAL STATUS OF THE EAST INDIAN MOVERS IN EDMONTON	137
6.8	CROSS TABULATION OF THE NUMBER OF MOVES MADE AND LENGTH OF STAY IN THE CITY AT THE TIME OF MOVE	140
7.1	REASONS FOR MOVING FROM THE PREVIOUS RESIDENCE (ACCORDING TO THE IMPORTANCE OF THE FACTORS IN CAUSING MOVE	148
7.2	REASONS FOR THE SELECTION OF THE DESTINATION (ACCORDING TO THE IMPORTANCE OF THE FACTORS INFLUENCING THE SELECTION OF A DESTINATION	157
8.1	RELATIONSHIP BETWEEN THE YEAR OF MOVE AND FORMATION OF THE HOUSEHOLD	167

Table Page

8.2 RELATIONSHIP BETWEEN THE YEAR OF MOVE AND BIRTH OF FIRST CHILD IN THE FAMILY.....170

8.3 RELATIONSHIP BETWEEN THE YEAR OF MOVE AND BIRTH OF THE LAST CHILD IN THE FAMILY.....173

8.4 RELATIONSHIP BETWEEN THE YEAR OF MOVE AND REUNION OF SPOUSE (FAMILY) IN EDMONTON.....177

List of Figures

Figure		Page
2.1	NUMBER OF EAST INDIAN IMMIGRANTS IN CANADA 1920-1980	33
2.2	PERCENTAGE OF IMMIGRANTS IN CANADA FROM EAST INDIA 1956-1980	34
2.3	DISTRIBUTION PATTERN OF EAST INDIAN HOUSEHOLDS IN EDMONTON 1982	59
4.1	MEASURES OF MOVE	97
5.1	AREAL VARIATION OF THE EAST INDIAN HOUSEHOLDS BEFORE AND AFTER THEIR LAST MOVE IN EDMONTON	104
5.2	NET CHANGE BY INTRA-URBAN MOVE	106
5.3	FLOW MATRIX, EAST INDIANS IN EDMONTON	111
5.4	RESIDENTIAL MOVEMENTS OF EAST INDIAN HOUSEHOLDS IN EDMONTON BY DISTANCE	113
5.5	DISTANCE OF ORIGIN FROM THE CITY CENTRE AND AVERAGE LENGTH OF MOVE	115
6.1	AGE DISTRIBUTION OF THE HEAD OF THE HOUSEHOLD	123
6.2	AGE DISTRIBUTION OF WIFE OF THE HOUSEHOLD	124

1. INTRODUCTION

The major purpose of this study is to analyze and discuss the patterns of the intra-urban residential migration of East Indians in Edmonton. Due to the fact that the specific literature on the intra-urban migration pattern of the East Indian community does not exist, it becomes necessary to investigate general intra-urban migration trends and gather socio-economic and demographic statistics for East Indians across Canada in order to provide a background for analysis of the intra-urban migration pattern of East Indians in Edmonton. To establish the frame-work for the intra-urban migration pattern, some selected features of urbanization in Canada will be examined. This will include the historical development of residential areas as well as the residential mobility trends in Canadian cities. The complete review of the relevant literature and references to specific studies will be presented in chapter two and three.

1.1 URBANIZATION IN CANADA

Canada is one of the world's most urbanized nations and it has become over recent decades a higher than average urbanized member of the world's community. According to Burke and Ireland, it is not only an urbanized but is becoming a metropolitanized, nation (Burke and Ireland, 1976). In 1980 Canada's population was 76 per cent urban and it ranked twelfth among the urbanized nations in the world

(Jones, 1981). Of the urban population, the majority is concentrated in a relatively small number of rapidly expanding large metropolitan areas. The Census of Canada, 1981, indicates that more than 50 per cent of the urban population is concentrated in nine metropolitan areas of more than half a million people. The process of urbanization has proceeded at a steady rate throughout the past century and has quickened within the last few decades. As noted by Burke and Ireland (1976), according to the Science Council of Canada, in this century and particularly in the last 25 years, Canada has been one of the most rapidly urbanizing countries among those in the "highly developed" category. Technological and economic development are the factors underlying this process of urbanization.

Viewed in relation to the whole of human history, technological development and consequently, employment opportunity, appears to be the main stimulus towards urbanization. Therefore, with technological development people started to congregate and eventually gave rise to the rapid growth of urban centres. However, the growth of the urban population is mostly caused by the migration of people from rural areas towards the growing cities, the areas of maximum employment opportunity. In the case of Canada, a significant proportion of this has been supplemented by overseas migration. The larger the city, the more diverse its economic activities and the more attractive it is to new immigrants seeking permanent employment. For example,

Toronto, Montreal and Vancouver collectively accounted for 52 per cent of all foreign born immigrants to Canada during 1966-71 (Immigration Statistics, Canada, 1966-71). About one third of all immigrants to Canada chose Toronto as their place of destination during the 1966-71 period (Gertler and Crowley, 1977). As a result, the big cities, Toronto, Montreal, Vancouver and Winnipeg include virtually all ethnic groups which occur in all the remaining Canadian cities (Simmons, 1974).

The history of Canadian cities is one of continuous population growth fed by a high rate of in migration from the rest of Canada and abroad. The flow patterns as well as the immigrants' characteristics, also vary among the cities. Gertler and Crowley (1977) have stated, "Toronto's flow is dominated by foreign immigrants, Montreal's by migrants from non-urban counties in Quebec and Vancouver's of migrants from other urban counties." (Gertler and Crowley, 1977: 74). This migration from other parts of Canada as well as from abroad was a response to the availability of jobs and the presence of diversified economic activities. For instance, in 1981, more than 40 thousand people in Toronto were involved with managerial and administrative occupations, construction and trade were the occupations for 11,175 people while the industrial divisions in Toronto were responsible for another 300,160 jobs (Census of Canada, 1981). Manufacturing industries provide about 30 per cent of the employment in the Toronto metropolitan area (Simmons,

1974, and Canadian Urban Trend, National Perspective vol-1, 1976).

With continuous immigration, demographic, ethnic and religious differences among the Canadian city dwellers have become more complex and these differences have a variety of influences on the way of life and the internal structure of the city. The literature on the pattern of residential development of North American cities shows that, individuals with similar origins, social position, values and expectations tend to locate in relatively close proximity. Therefore, their group interaction can be maximized and group norms or ethnic identity maintained (Jones, 1967; and Matwijiw, 1979). As a result of the general process of residential differentiation, ethnic concentrations occur in different parts of different cities. These sections tend to reflect the presence of similar ethnic groups. These ethnic groups vary considerably in the degree to which they are residentially concentrated in different cities. In 1961, residential segregation was highest in Montreal followed by Toronto, Winnipeg and Ottawa. In the same period, the degree of segregation was highest among the Italian and Asiatic ethnic groups followed by Russian, French and Ukranian in the different Canadian metropolitan areas (Matwijiw, 1979).

With an increase in population, especially in large cities, the ethnic groups create "sub-cities" within the city. Their concentrations possess their own commercial core, theatres and institutions which have a great impact on

the physical structure of the city. For example, Toronto contains "sub-cities" of various ethnic groups of Italian, Jewish, Greeks and Portuguese in different parts of the metropolitan area. Italian, French and Ukranians are the most segregated ethnic groups in different parts of Winnipeg. The city dwellers of these "sub-cities" have their own culture, customs, beliefs and eating habits. They also prefer to use their own language for social interaction among themselves (Simmons and Baker, 1974; and Matwijiw, 1979).

1.2 GENERAL ASPECTS OF THE RESIDENTIAL DIFFERENTIATION IN CITIES

The residential area of each Canadian city occupies a large part of the build up area. Each residential area has different types of urban dwelling units within it. These include single family detached homes, duplex units, low rise apartment structures and high rise apartment buildings. These housing types vary in their locational settings. Near the city centre, the residential area mostly consists of high rise apartments, walk-up apartments and boarding houses. Further out from the city centre, the residential area consists of all different types of dwellings and then slowly gives way to strip development along the highways. In the suburbs most of the dwellings are single family detached homes (Simmons, 1974; Northam, 1975; and Gertler and Crowley, 1977).

The spatial distribution pattern, the land occupied by each dwelling unit and the characteristics of the dwellers, also vary in different parts of the city. There are spatial variations in population density, housing types and quality. The suburban residential area is characterized by a low density of population and single family dwellings. The majority of the suburban dwellers are families with children and with a relatively high social and economic status. On the other hand, the inner city is characterized by a high population density, apartment buildings and boarding houses. These are occupied mostly by young adults either single or newly married, and the aged who have always lived there or have moved there upon retirement or widowhood (Simmons, 1974). The people of various ethnic groups also tend to live in the inner city residential area. Yet, in this area people with relatively low social and economic status predominate.

Generally it has been found that with the increase of population and the expansion of the city, certain characteristics of the residential areas also change. The inner city areas expand and undergo changes by increasing their density of population as well as dwelling units. The areas expand in size by including the surrounding areas which were formerly areas on the outer zone of the inner city. Consequently, the higher status residential areas shift towards the outer margin of the city and the old higher status residential areas become the middle and subsequently low status residential areas. According to

Herbert (1972) and Smith and McCann (1981), the larger houses of the earlier upper class groups subdivide into apartments and pass to lower income groups and the quality and attractiveness of these houses declines gradually through this filtering down process. The residential distribution pattern in different Canadian cities in the 1970's indicates that family status and socio-economic status of the households display either sectoral patterns or concentric zonations around the centre of the city (Herbert, 1972; Simmons, 1974; Davies, 1978; and Davies and Knight, 1978).

Davies and Knight (1978) and Davies (1978) in two separate studies have identified that socio-economic status depicts a sectoral pattern of residential development in both the Kingston and Edmonton metropolitan areas. However, Davies found family status in Edmonton adopted a concentric pattern as hypothesized by Burgess (Burgess, 1923; and Davies, 1978). The variables used to describe family status are associated with family characteristics, namely household size, number of children in the family, fertility level, type of occupied dwelling unit, age, sex, and marital status of the members of the household. Socio-economic status is measured in terms of household income, tenure, occupation, level of education, ethnic origin of the members of the household, size, age and value of the occupied dwelling unit (Herbert, 1972; Davies, 1978; and Davies and Knight, 1978). Herbert (1972) in his social area analysis at Winnipeg

identified a sectoral pattern of residential areas with respect to socio-economic status but concentric zonation in terms of family status. Simmons and Baker (1974) identified a different pattern for the residential areas of Toronto. It was found that the socio-economic status displayed a concentric zonation but family status adopted a sectoral pattern (Simmons and Baker, 1974).

1.3 THE CLUSTERING OF MIGRANTS AND MINORITY GROUPS

Clustering of minority groups, especially near the centre of the city, is a common phenomenon in almost all Canadian cities. The economic conditions of the immigrants is the most important cause for this clustering. Many of the earlier immigrants were unskilled and had little or no capital when they arrived in the city. Therefore, they were restricted to areas of low economic status mostly in the inner part of the city. At that time they were able to gain a foothold in the city only by renting the cheap inner city properties. On the other hand, migration has always been an age sex selective process. Many of the young unmarried persons were males drawn towards the typical living areas of non-familism life-style (Freedman, 1967). It should be mentioned here that earlier immigrants did not cluster in the inner city only but also lived around its industrial zones. That is they lived near employment centres where the population density, house rent, socio-economic conditions were like the inner city residential area. As a result,

there developed a regionalization of immigrant groups.

Even though the immigrants had different occupations, they preferred to settle in one area to maintain their cultural and ethnic ties. Consequently, a node of residential settlement was formed by each ethnic group, distinct from others in ethnicity, as well as socio-economic conditions. The socio-economic conditions include occupation, income, educational background and household characteristics. The household characteristics include age and sex of the members of the households, size of the household and type of family, i.e. the nuclear or extended family (Johnston, 1971; Northam, 1975; Balakrishnan, 1976).

Spatial clustering of each ethnic group also occurred as an outcome of chain migration. Caldwell (1968) defines this as, when one member of a family has migrated, there is a very high probability that some of his relatives will also move to the same destination. Information, sometimes remittances from the successful pioneer migrant, cause the higher probability of these moves. As a result, most of these immigrants come from a particular area. For example, "Sikhs" are predominant among the East Indian immmigrants in different Canadian cities, but they are from only one province of India, the "Punjab". In 1971 only 3 per cent of India's population was living in the province of Punjab (Census of India, 1971). The earlier immigrants help the new immigrants to find employment and accommodation within the city, mostly within close proximity to their place of

residence.

The inability of new members of the minority group to assimilate into the majority social structure is because of different language, customs, culture and religion. If the new immigrants have a language problem it is difficult for them to communicate or interact with the host society. As a result they prefer to live in close proximity to those people with whom they can communicate through their mother tongue. The new immigrants like to maintain their customs, culture and religious beliefs which are often different from the host society. It is difficult for them either to accept very quickly the culture and customs of the host community or to asssimilate their culture and religious beliefs with that of the host society. As a consequence, it is easier or acceptable, for them to settle down near other immigrants of the same group where they can get some moral, as well as cultural support.

Residential segregation also occurs through the desires of the minority group. New immigrants want to maintain their own identity, religion and social status. In some cases these identities are also maintained through different institutions which make for effective communication within the group. Balakrishnan states that this institutional completeness also requires a minimum population size (Balakrishnan, 1976). It can be said then, that residential segregation or institutionalization also depends on the size of the minority groups as well as the host community.

Balakrishnan also indicates, "The larger community, generally the larger the size of the ethnic groups, which makes many specialized institutions viable such as special language newspapers, denominational churches, ethnic social clubs and other cultural associations particular to an ethnic group." (Balakrishnan, 1976: 282-283).

Residential segregation of ethnic groups decreases over time. With the increase in the length of stay, the immigrants want to become more like the host community. This is especially true for the second and third generations who want to assimilate with the general city dwellers by accepting more and more the values of the majority. A change of occupational structure and economic conditions also affects their residential distribution pattern within the city. As the occupational structure of the minority group begins to resemble that of the total community, residential segregation decreases (Balakrishnan, 1976).

Marston (1969) reports that residential segregation decreases as the socio-economic condition of the members of the minority group increases. He says, "As members of an ethnic group advance socio-economically, they tend to locate in neighborhoods in which members of the native population and other ethnic groups of the same socio-economic status reside." (Marston, 1969: 65). In other words, the upward change in socio-economic status creates a spatial residential mobility by increasing the ability to rent or buy better housing in different residential areas of the

city.

1.4 WHY IMMIGRANTS MOVE?

Each immigrant group has certain socio-economic as well as demographic characteristics which differentiate it from others. As time passes, the earlier immigrants, especially second or third generations, gradually move towards the outer zone of the city by assimilating with the general urban population. Subsequently, new immigrants take the location in that section of the city the earlier have left. This replacement again depends on the rate of inflow of new immigrants and also on their socio-economic condition. Residential segregation of each ethnic group decreases with a decrease in the inflow of new immigrants. Conversely, segregation increases with an increase in inflow. This is especially true when the new immigrants are predominantly poor. Their economic condition compels them to live in the ethnically segregated areas with low economic status. On the other hand, new immigrants, who have come with some capital do not like to concentrate in the ethnically segregated residential areas. Their economic condition provides them with a wider range of choice of residential areas of the city. As an outcome of this wider range of choice, they prefer to live in middle or upper class residential areas, where they can afford to buy or rent comparatively better housing.

The movement of the immigrants from the city centre towards the periphery of the city occurs through the process of invasion and succession which is basic to Burgess's concentric zone model. Burgess assumed that urban growth was maintained by immigrants arriving in the central city. They then tried to make their way outwards from the central city often forced to by commercial and industrial invasion. The theory was formulated in the context of Chicago in the first part of the twentieth century when that city was experiencing massive immigration both from within the United States and from overseas. The idea of the model is based on the assumption that the newcommers to the city are poor and whenever their economic condition permits they move from their initial point of entry towards the outer zone of the city.

However, the assumptions of Burgess's model are less realistic for many present day cities. In the first place, nowadays, most of the immigrants in Canadian cities are not poor and unskilled. Since the last few decades, a significant percentage of immigrants are professionals and skilled persons (Immigration Statistics of Canada, 1956-80). Moreover, this model does not take into account the fact that newly arrived immigrants can quickly increase their economic standard. As mentioned by Husaini (1981), the Green Paper (1974) study indicates that the East Indians who have arrived in Canada in 1970 were at the lower end of the economic scale in their first year of arrival. Over a period

of three years their income increased to a middle economic scale in 1972 (Husaini, 1981). They increased their economic standard in different ways: i) by having a better, sometimes more than one job; ii) other family members also get involved with jobs to increase the gross income of the household; iii) they also go into business, in some cases only with the family members. The immigrants aspirations' regarding housing also change with rising economic status. Therefore, they change their dwellings as well as neighborhoods to fulfil their changed housing aspirations. When their economic condition permits, they move to those residential areas which are vacated by middle class city dwellers.

Besides the ethnic characteristics, it is expected that the factors which cause the city's people to relocate within the same urban area also cause the immigrants to change their residence within the city. The causal factors for the relocation of the city dwellers are closely associated with the household's stages in the life-cycle. The present study is an attempt to analyze the intra-urban residential migration pattern of the East Indian households in Edmonton with respect to some selected aspects of the life-cycle model. These aspects are age, sex, marital status of the members of the household, size and socio-economic status of the household, socio-economic status of the neighborhood households, accessibility characteristics of the neighborhood including proximity to school, work, community

centre, shopping centres, hospitals, churches and communication media. These selected aspects will be discussed in detail in chapter three of this study.

1.5 INTRA-URBAN MIGRATION

This study will investigate the intra-urban migration pattern of a minority community in a Canadian city. As an introduction to the study, this section furnishes a brief and general discussion on intra-urban residential migration in North American cities. The discussion includes: a) the definition of intra-urban migration; b) the causal factors; and c) the impact on the city structure.

1.5.1 Definition

Intra-urban residential migration or sometimes called intra-urban residential mobility, is the change of residence within the same urban area. It is one of the many different types of movement within an urban area. These include trips to work, shopping, school or personal business and trips for social and recreational purposes. The characteristics of intra-urban migration have been stated by Pryor (1976) and these are followed in this study. To Pryor intra-urban residential migration,"-----is characterized as involving the total displacement of a household's reciprocal movement cycle within the city and there is no regular movement to any nodes associated with the former residence location." The reciprocal movement cycle refers to different types of

movement like the regular journey to work, school, and to intra-community shops, recreation and close friends within the urban area (Pryor, 1976). Therefore, this study will look at those city dwellers who had changed their addresses since arrival in the city. McCracken (1973) used the change of telephone numbers as a criterion to identify the moves in Edmonton. The change of address will be used as the criterion to identify the moves for the purpose of this study irrespective of the distance of the move and the length of stay in each dwelling unit.

1.5.2 Causal Factors

Nowadays, it has been recorded that the majority of the migratory movements of the United States and Canada are intra-urban (Simmons and Baker, 1974; and Weinberg and Quigley, 1977). As city size increases, the mobility rate also increases. ' Jones (1981) has noted that the rate of intra-urban residential mobility is positively related to the city size. The varieties and changes of elements of the determinants and consequences of migration are the main reasons for the higher mobility rate. For instance, because of the diversified economic activities, net inflow of migrants is very high in big cities. With the high inflow of migrants, housing stock is altered. With the increase in housing stock the city area increases. The political boundary alters. With an increase of housing opportunities,

---

' Proportion of population which has changed residence during a particular time period.

the households with different demographic (age, sex, marital status, household size) and socio-economic (income, occupation, education, tenureship, ethnic background) characteristics change their residence and consequently affect neighborhood stability.

The stages of the life-cycle, socio-economic status of the household and the physical structure of the city are the main determinants of intra-urban migration. The literature indicates that the stages of the life-cycle are one of the most important determinants in distinguishing between stable and mobile households. As the life-cycle approach is going to be used in this study, the life-cycle model will be discussed in detail (see Chapter 3). Therefore, this section presents a brief and general discussion of the stages of the life-cycle and its relationship with the intra-urban migration process.

Residential mobility is high among young families and declines with increasing age of the head of the household. This means the rate of mobility is closely related to the stages of the life-cycle through which the head of the household passes. High mobility rates in the early stages of the life-cycle presumably reflect family expansion with the birth of children and consequently different housing needs. That is a demand for more dwelling space.

Needs also change in different stages, being more rapid in the early stages than the later stages of the life-cycle. Housing needs in the child-bearing stage (mostly within one

decade of the formation of the household) are sharply different from both pre-child and child-rearing stages. However, the housing needs in the child-launching stage are not widely different from the child-rearing and post-child periods (Table 3.2, see chapter 3).

The life-cycle model states that in general, the households which are in the pre-child stage have comparatively lower income than those who are in the later stages of their life-cycle. Their incomes level usually increases as they proceed towards the successive stages, and reaches the maximum level when they are in the child-launching stage of their life-cycle. The households which are in the pre-child stage live in the central city apartments. When they reach the child-bearing stage, they move to a single family unit near the apartment zone. After a certain time, i.e. in the child-rearing stage, they prefer to move towards the suburbs to single family dwelling units in a neighborhood with households also in the child-rearing stage and a higher socio-economic level. They live in the suburbs until the post-child stage and move to the apartment buildings in later-life (Table 3.2).

The literature indicates that, the mobility rate also varies according to different socio-economic statuses which are again related to the life-cycle. Generally, the households which are in the early stages of their life-cycle have a low level of socio-economic status (in terms of income, occupation, level of education, tenureship, economic

value of the occupied dwelling unit). Usually as the household proceeds through the successive stages of the life-cycle, they also advance in socio-economic level. Tenureship is the most widely used socio-economic variable in the field of intra-urban migration to distinguish between the stable and mobile households. It is found that renters are the most mobile of all, mostly because a significant proportion of them are in the early stages of their careers and life-cycle with a comparatively lower income than those who are in the later stage of their life-cycle. With a lower income they prefer to rent an apartment, but with an increase in income they prefer to move to better housing. Renters change their residence more often than the house owner. A significant proportion of the renter movers are those who have aspirations to become owners (McCracken, 1973; and Rossi, 1980).

With an increase in economic status, the households change their residence as well as neighborhood to improve their quality of life. Households in low value housing areas change residences more often, mostly towards the next highest value housing areas, than those households in the high value housing areas. The middle income households change their residence more often than those who are in the upper and lower income groups. This is mainly because the change in economic status is more common with this group than the others. As economic status improves the desire to change neighborhoods also increases as a wider range of

housing becomes available for the group (Simmons and Baker, 1974; and Clark, 1980).

The movement pattern is largely influenced by the physical structure of the city. As renters are more mobile than owners the major flow is from apartments to single detached homes. The flow thus is away from the city centre, from the apartment zone to single detached housing areas. The housing opportunities existing in the city also have a great impact on the migration flow. Simmons and Baker (1974) have stated that new housing biases the flows strongly. That is the people prefer to move to a newly constructed housing area rather than an old one.

1.5.3 The Impact of Intra-urban Migration on the City Structure

Intra-urban residential migration is the immediate cause of changes in the composition and character of urban neighborhoods. One neighborhood gains and another loses a family of certain characteristics: number of persons, sex, age, ethnic origin, language, food habits, religion, income and level of education. So, by virtue of a move, the social environment and consequently the urban structure is altered as well. This simultaneous change is a complex process undertaken by a wide variety of households which move for a wide variety of reasons.

With the increasing number of immigrants of diversified ethnic characteristics in Canadian cities, the complexity of

a city's social structure is also increasing. By changing their place of residence within the city the movers carry certain ethnic characteristics with them from one neighborhood to another. Therefore, these changes have a great impact on the neighborhood as well as the city's market-oriented activities, that is the amenities which serve the households. For example, one grocery store gains and another loses a customer of certain preferences and food habits (e.g. vegetarian, fish eater, pork eater, beef eater). The degree of impact also varies when the mobility pattern of each immigrant community is considered individually. This is because, each immigrant community, especially the minority communities, has different cultures, customs, food habits and religious beliefs from the host society. In these circumstances in order to accomplish better city planning, an understanding of the determinants of residential mobility of different minority communities is very important for planners.

The study of intra-urban migration of a minority group in terms of who moved among them, the characteristics of the movers of that minority group, where they moved to and why they moved will provide their overall pattern of movement in the city. The reason for their moves will show the relationship between the households of that minority group and environment surrounding them. It will also indicate whether the reasons for their relocation are similar or not to the other movers in the city, and do they have other

special preferences or reasons for their relocation decision in the city. The analysis of the reasons for their move will provide an idea of how they use their surrounding environment, how they perceive it and what are their priorities within it.

Among the different causes of intra-urban residential migration, the life-cycle is postulated as the most significant explanation for individual household mobility in North American cities. The life-cycle of a household of any minority community in a Canadian city is not necessarily different from any one else's. The life cycle model has been found to be very important in understanding the intra-urban residential migration pattern of a minority community. The study therefore will explore the mobility pattern of East Indians in Edmonton as it relates to changes in their life-cycle.

1.6 SUMMARY

Canada is one of the most urbanized nations of the world. More than three quarters of its population live in urban areas. However, more than half of them are concentrated in only nine metropolitan areas. A significant proportion of the migrants to these urban centres are from overseas.

A large part of each urban area is occupied by residential development. In North America, each city has a generalised residential pattern much akin to every other. In

general, socio-economic status displays a concentric zonation around the city centre with the lowest status near the city centre and increasing status towards the periphery. The demographic characteristics of the city dwellers overlays the social pattern with high density, dominated by young adults and old people at the centre. The density decreases towards the periphery which is mostly inhabited by families with children.

The presence of segregated residential districts for different ethnic groups is a common phenomenon of Canadian cities. This is especially true of the larger cities of Toronto, Montreal, Vancouver and Winnipeg. Ethnic concentration occurs in different parts of different cities, but mostly near the inner zone of the city. Consequently, these sections tend to reflect the presence of different ethnic groups. In big cities, the ethnic groups create "sub-cities" within the city. The main reason for clustering appears to be poor economic conditions, ethnicity, language problems, low educational background, less occupational skills and the inability to assimilate with the host society.

The degree of ethnic segregation varies in different cities as well as among different ethnic groups. It depends on the rate of inflow, size and socio-economic status of the immigrant community. The degree of segregation is low when occupational and economic status of any immigrant community is more like the general populace. Generally, after a

certain time of arrival, the immigrants improve their economic and occupational status and tend to assimilate with the host society. Subsequently, they change their residence and neighborhood and move towards a better class residential area of the city. This is especially true for their second and third generations. As a result, as assimilation increases, outward movement also increases.

Intra-urban residential migration is a common phenomenon of Canadian cities. Changes of life-cycle seem to be the most important in creating this mobility. With the change of the life-cycle, the household's demands also change. These demands include space, ownership of housing, accessibility characteristics to the residential area, and social environment of the neighborhood. In the early stage of the life-cycle preference for a residential area is more related to the career and occupational ability of the head of the household. In the child-rearing and launching stages preference for a residential area is more related to the dwelling unit and neighborhood characteristics.

Change in socio-economic status creates social mobility too and ultimately residential mobility. By improving one's socio-economic status the level of aspirations regarding housing also change. Consequently, negative feelings increase at the home of origin. As a result a move takes place.

Besides ethnic and socio-economic status, the stages of the life-cycle of an immigrant are not necessarily different

from some one else in the city. Therefore, it is expected that the aspirations and needs regarding housing of an immigrant also change with changes of the life-cycle. Consequently, an immigrant household also changes its residence with a change in its life-cycle. This study is an attempt to find out how the mobility pattern of East Indians in Edmonton is associated with the life-cycle model.

1.7 THE STATEMENT OF THE PROBLEM

This study is an investigation into the pattern of intra-urban residential migration of the East Indians in Edmonton. Presently people of East Indian origin are one of Canada's most important sources of new immigration (Buchignani, 1980). Almost all of them reside in different urban centres of Canada. About five per cent of them are living in Edmonton representing about one per cent of Edmonton's total population. For the present study they are treated as one of the minority communities in a Canadian city.

Specifically, this study seeks to analyze the relationship between residential mobility and the causes of relocation of East Indians as the move relates to the stages of their life-cycle. Several questions regarding their mobility pattern need to be answered. Who change their residence ? What are their origins and destinations? How does the life-cycle influence their preferences and selection of destination?

To date, there appears to have been some work done on the distribution pattern of East Indians in different Canadian cities (Periera, 1971; Cassin, 1977; Buchignani, 1980; and Yasmin, 1982). No research has been done on their intra-urban residential migration. However, a review of the general literature on intra-urban migration reveals a widespread assumption that intra-urban migration is the process by which a household adjusts its housing needs to a change of household structure. Therefore, the migration study of the East Indians will be examined as it relates to the changes of life-cycle of this minority group.

A secondary goal is to find out the factors which cause households to move and subsequently to select their destinations in the city as these are associated with the stages of the life-cycle.

Hence the research problem is to investigate the relevance of the stages of the life-cycle to East Indians intra-urban residential mobility in Edmonton. It is proposed that the aspects of the life-cycle model have a significant influence on the intra-urban mobility pattern of this minority community in a Canadian city.

1.8 PLAN OF THE INVESTIGATION

This thesis is organised in the following way. Relevant information regarding the subject is necessary in order to develop the background for the investigation. The subject of this study is the intra-urban migration of the East Indian

community in Edmonton. Thus, chapter two of this study provides relevant information on this community in different Canadian cities. The first section of chapter two includes the historical background, socio-economic and demographic characteristics and the geographical distributions, of East Indians in different Canadian cities. Since the intra-urban migration of the East Indian community in Edmonton is the specific subject of this study, their geographical distribution in Edmonton is presented in the last section of chapter two.

A review of the literature on intra-urban residential migration in North American cities is essential to elaborate the objectives of this study. Chapter three gives the conceptual background for the analysis. This chapter identifies who moves, why do they move and where do they move. This discussion will be restricted to North American urban dwellers. Finally in the last section of this chapter, the research expections of this study are formulated based on selected aspects which are the outcome of the literature review. These aspects, in general, relate to the life-cycle model which include demographic and socio-economic characteristics of the moves as well as the spatial aspects of the move.

Chapter four illustrates the methodology and data. This chapter describes the study area, data source, sampling technique and sample size, questionnaire design and survey method. Chapter four also illustrates the methods of

analysis. Analysis, discussion of the data, test of research expections, the findings of the study and its implication are the content of the following three chapters. Chapters five, six and seven respectively cover the spatial dimensions of flow, the demographic and socio-economic characteristics of the movers and the reasons for their moving and selecting a destination. Associations between the life-cycle and intra-urban migration of East Indian households are analyzed in chapter eight. The concluding chapter of this study is chapter nine. This chapter synthesizes the study's findings and draws several suggestions for future research.

2. EAST INDIANS IN CANADIAN CITIES

Canada is characterized by a population of immigrant groups of diverse ethnic origin which constitute a society with the feature of an ethnic mosaic. The proportion of people of Asian origin in this ethnic mosaic is very insignificant, representing only about three per cent of total Canadian population. More than 40 per cent of the people of Asian origin in Canada are from East India and these people constituted only about one per cent of the Canadian population in 1981. In the literature, East Indians have been identified as a minority community in this multicultural society, being characterized by its small numbers, strong community ties through different ethnic, cultural and religious institutions and with a tendency to settle down in the middle class residential areas of large cities of Canada.

Since demographic and socio-economic characteristics like age, sex, marital status, size of the household, ethnicity, education, occupation and income of the city dwellers, have a great impact on the intra-urban residential migration pattern and process in North American cities, it becomes necessary to investigate the demographic and socio-economic characteristics of East Indians in Canadian cities to prepare the background for the study. Because of the lack of published and readily available data and literature, this discussion deals only with a few cities.

These are Toronto, Vancouver, Winnipeg, Saskatoon, Windsor and Edmonton.

The first section of this chapter will include the definition which is going to be used to identify the East Indians for the purpose of this study, the historical background and trends of immigration and the demographic and socio-economic characteristics of East Indians in different cities of Canada. The latter part of this chapter comprises an analysis of the distributional pattern of East Indians in Edmonton in 1982.

2.1 DEFINITION OF EAST INDIANS

The term "East Indian" as used in this study will refer to persons who originated from India, Pakistan, Srilanka and Bangladesh now residing and working in Edmonton, irrespective of their immigration status. The term "East Indian" is commonly used in Canada for those people, who originated from India, Pakistan, Srilanka and Bangladesh, and people who emigrated from Kenya, Tanzania, Uganda, Fiji, The United Kingdom, South East Asia and West Indies but originally came from the Indian subcontinent (Buchignani, 1977). This study will concentrate only on the East Indians whose country of birth is India, Pakistan, Srilanka and Bangladesh regardless of where they came from before emigrating to Canada.

2.2 THE HISTORICAL BACKGROUND

The earliest East Indian immigrants arrived in Canada between 1898 and 1902. Like the Chinese and Japanese, they first came and settled on the Pacific coast, in the province of British Columbia. The majority of these first pioneers were "Sikh" soldiers who went to England in 1897 to attend Queen Victoria's Diamond Jubilee celebration. While returning to India, by way of Canada, some of them decided to settle in British Columbia (Husaini, 1981). Although nearly all the early East Indian immigrants were "Sikh", the Canadian society simply called them "Hindoo". The Census of British Columbia in 1906, shows that there were 258 East Indians in that province, but they called them "Hindoo" (the term used was synonymous with East Indians). The number of East Indians in British Columbia increased dramatically after 1904 and over 5,000 had arrived in the province by the end of 1908.

People in British Columbia had protested periodically against Asian immigration since 1878 (Husaini, 1981). As a result, the Federal Government of Canada decided in 1907 to terminate the immigration of Asians, especially Indian immigrants. As a consequence of this new immigration law, the number of East Indian immigrants suddenly declined after 1908. The only fundamental change in this exclusionary policy occurred in 1920, after which, the wives and dependent children of legal Canadian East Indian residence were allowed to join their husbands and fathers. However,

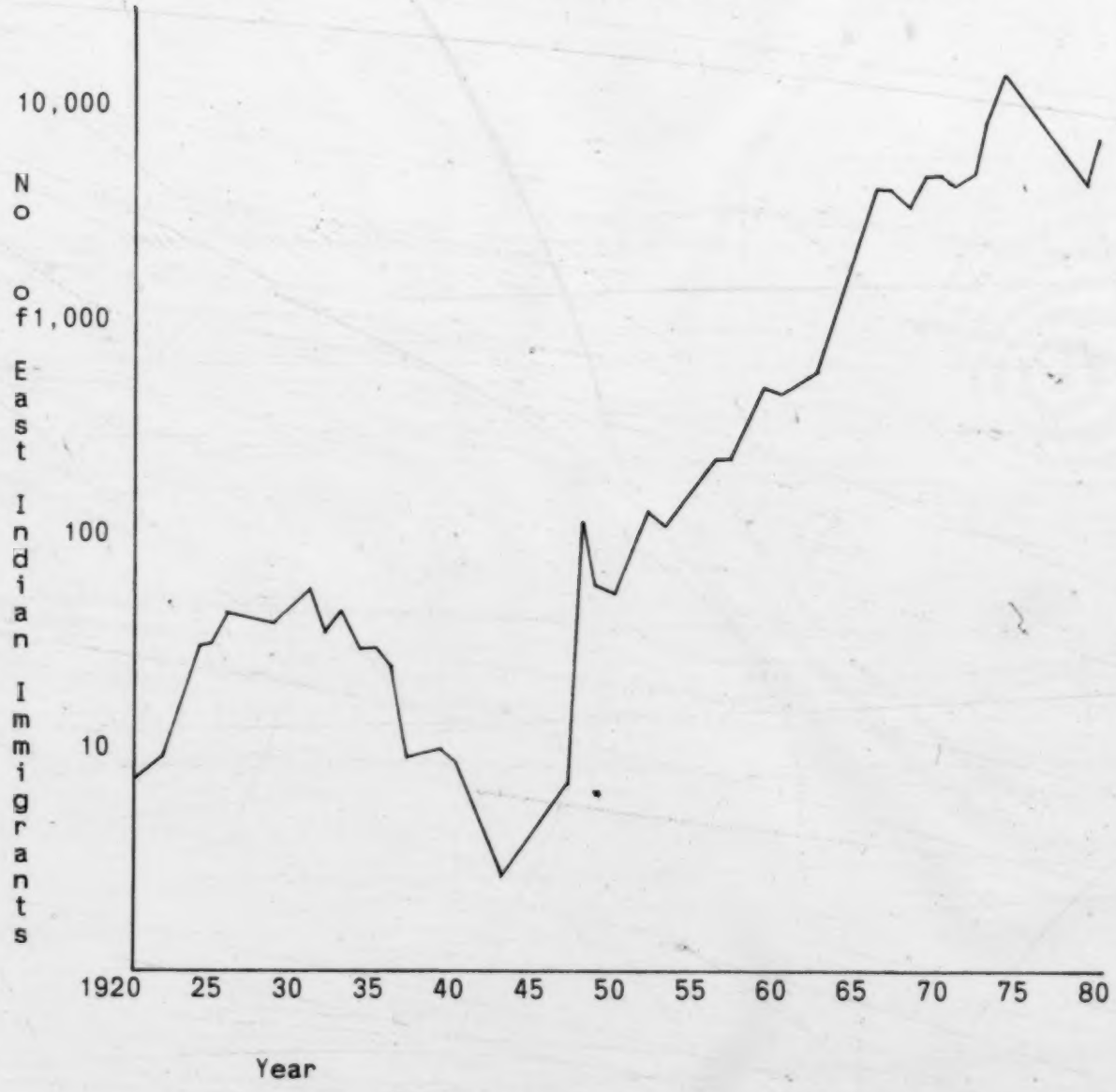
only a few wealthy men could actually afford to bring in their families to join them (Buchignani, 1977).

Family migration has become common only during the last 30 years. It was after 1947 that certain changes were introduced in the Canadian government's immigration policy, resulting from the gradual liberalization of immigration laws. Thus the number of immigrants increased substantially after 1947 and even then the number was not significant (Figure 2.1). This situation continued until the early 1960's, when less than one per cent of the immigrants in Canada was from East India (Figure 2.2).

Since the mid-1960's, when Canadian immigration regulations were relaxed to allow non-Europeans to apply on equal terms with those from traditional source countries, the number of East Indian immigrants increased rapidly. This coincided with a great increase in Asian immigrants to Canada and it has continued with marked increases in 1973 and 1974 (Figure 2.1). Even though they increased rapidly, East Indian immigrants comprised only 5 per cent of the total immigrants in Canada for the period 1965-74. However, during 1973-74, they comprised about 8 per cent of the total immigrants in Canada. D'costa explains that this sudden increase is the result of the addition of visitors who were granted landed immigration status, "--- particularly as a result of the adjustment of Status Programme ('amnesty') in 1973." (D'costa, 1977: 169). The immigration regulations encouraged skilled persons and did not allow visitors to

FIGURE 2.1

NUMBER OF EAST INDIAN IMMIGRANTS IN CANADA 1920-1980

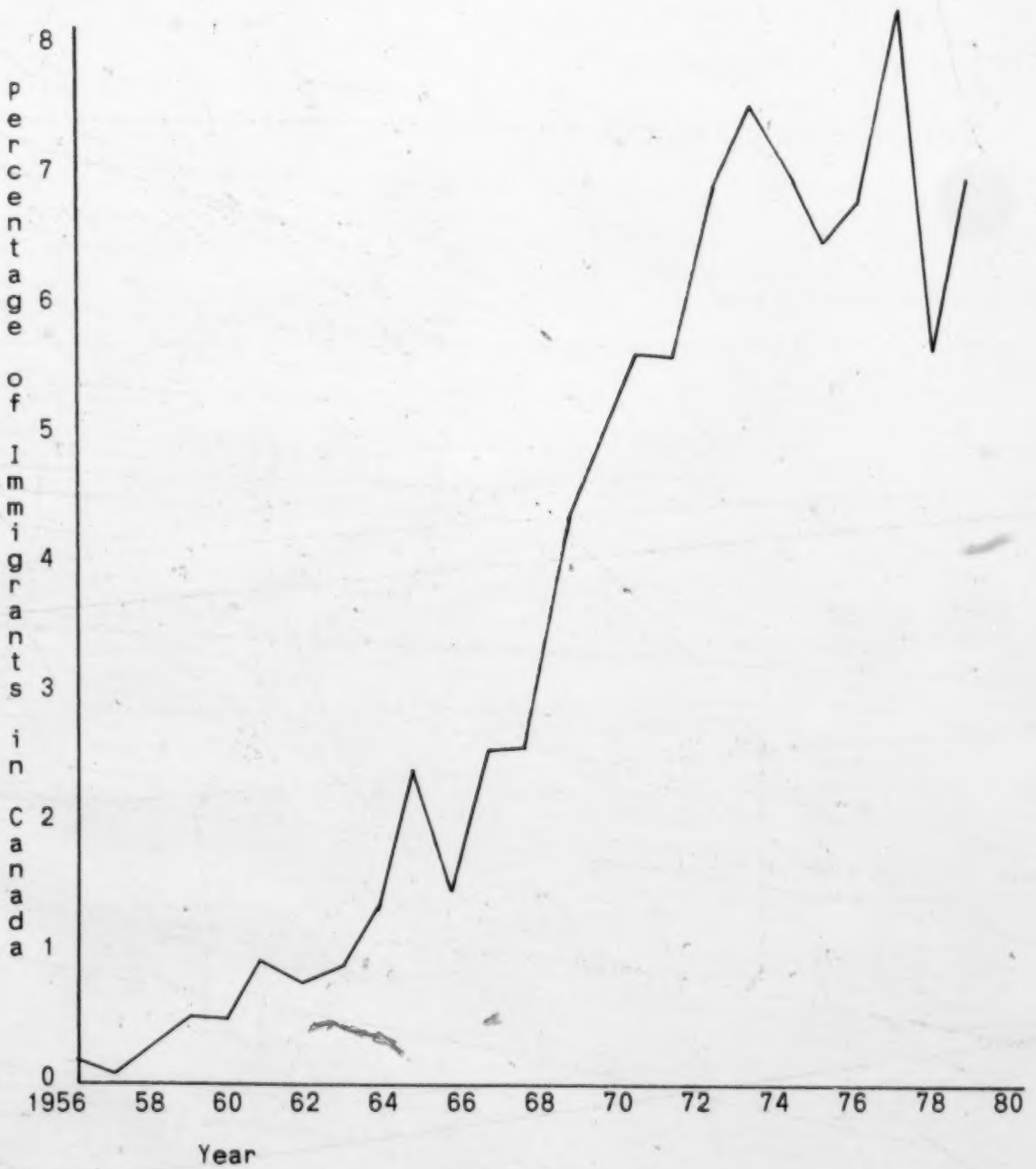


Source: Husaini, 1981: 84 and Immigration Statistics, 1956-80.

University of Alberta

FIGURE 2.2

PERCENTAGE OF IMMIGRANTS IN CANADA FROM EAST INDIA 1956-80



Source: Immigration Statistics, 1956-80.

University of Alberta

apply for immigration status. The significant decrease in numbers but increase in percentage of East Indian immigrants since 1974 can be explained by the Canadian immigration's changed regulation.

According to the Census of Canada, in 1981 there were 116,992 East Indians in Canada. This group includes all East Indians, whose mother tongue is any of the East Indian languages irrespective of their country of birth. The Census of Canada 1971 shows 52,100 Indo Pakistani, which represents 77 per cent of East Indians (as identified by Census of Canada). The 1976 and 1981 Censuses do not contain the data for this community in particular. As a result, the exact current statistics on the population size of this community in Canada are not available for the purpose of this study. Demographic and socio-economic characteristics therefore have to be derived from a review of literature on this community in different Canadian cities.

2.3 DEMOGRAPHIC CHARACTERISTICS

The demographic characteristics which have a significant influence on the residential mobility pattern are age, sex, marital status and household structure of the city dwellers. Therefore, this section of this chapter discusses only age, sex, marital status, and household structure of East Indians in different urban centres of Canada.

2.3.1 Age

Like all other immigrants, the majority of East Indian immigrants are relatively young. This age group has also been identified as the group most mobile in North American cities (Goodman, 1978). Although Nizamuddin (1977) showed migrants from India and Pakistan in Windsor to be between 21 and 30 years of age, the majority of the studies have revealed that they are between 25 and 35 years of age. This means that the East Indians are comparatively younger in Windsor than the other cities of Canada. It should be mentioned here that 20 per cent of the city population of Windsor are between 20 and 34 years, whereas less than 19 per cent of the Canadian population are in this age group (Census of Canada, 1981).

Among the East Indians in Canada, males tend to be older than the females. The mean age for husbands and wives were 36 and 31 years respectively for the Indian immigrants in Saskatoon (Siddique, 1977). These mean ages indicate they are in the stage of their life-cycle where they are most likely to change their household structure which consequently influences their mobility rates.

2.3.2 Sex

The majority of the East Indian community members in Canada are male. Almost all of the earliest East Indian immigrants who came before 1920 were male (Buchignani, 1980). Smith (1944) estimated that while there were 5,000

East Indian men in British Columbia during the entire pre-World War II period, there were only 400 East Indian women. From different studies of the last ten years it has been found that even now the members of this community are predominantly male. Nontheless, the 1981 Census shows that approximately 53 per cent of Canadian East Indians are male. In this connection it should be mentioned here that this category of "East Indians" has been identified in terms of mother tongue which might inflate the figures. This is because in addition to the "East Indians" in Canada, some other people who have not emigrated from East India but their earlier generations did, might have one of the East Indian languages as their mother tongue. Periera (1971) states that 86.2 per cent of the members of the East Indian community in Winnipeg were male in 1969. The sources of data for this statement were the membership lists of different East Indian Associations in Winnipeg. Pariera's findings corresponds to Richmond's findings where Richmond (1967) reports that 87.4 per cent of the post-War immigrants in Canada were male. These results also supports the concept that their migration is sex selective.

Simmons and Baker's (1974) intra-urban migration study on Toronto reveals that the females of the age group of 20-34 are most mobile among the female city dwellers and the mobility rate of this female group is the same as the male's of the same age group. On the other hand, the mobility rate of males of the age group of 25-44 is highest among all the

city population. Thus, if the East Indians in Canadian cities are more male and most of them are within the age group of 25-44, it is expected that their mobility rate would also be high like other male Canadian city dwellers of this particular age group.

2.3.3 Marital Status

East Indian immigrants have a much higher married to single ratio than other immigrants in Canada. They are married either by the time they arrive here or within a few years afterwards. Richmond (1967: 35) shows that 58 per cent of the post-war immigrants in Canada were married at the time of entry. However, in Winnipeg in 1969, 73 per cent of East Indian immigrants were married (Periera, 1971), and this percentage was much higher for females. As remarked on earlier this is a male dominated community in Canada. Married men often arrive first unaccompanied by their wives and dependent children and after a certain period, until some control over the economic and social setting is secured, the family joins them from their home country (Periera, 1971; Cassin 1977; Awan, 1980; and Yasmin,1982). Consequently most of the females come to Canada either as wives or as dependent person of a male immigrant. Most come as wives.

Periera (1971) states that Indian immigrants appear to be migrating as married immigrants rather than as single persons, thereby creating a large demand on the consumer

market and directly aiding Canada's economy. In addition to consumer demand, they also create a housing demand. Consequently they influence the rate of residential mobility as well as its pattern by changing the household structure, either by marriage or by family reunification.

The mean length of marriage of the East Indian couples in Saskatoon was slightly over 8 years (Siddique, 1977). According to Rossi (1980) this is the most critical period for a change in household structure and subsequently a change in the place of residence.

2.3.4 Family Structure

With only a few exceptions, most of the families of the East Indian community are small. On the other hand, only a few couples are childless. However, the average family size for Indian immigrants in Winnipeg was 3 persons in 1969 (Pereira, 1971) but the family size of the "Sikh" community in Vancouver was 5.5 in 1976 (Chadnay, 1976). Ninety-two per cent of Indian and Pakistani families had at least one child in Saskatoon in 1973 (Siddique, 1977). This small size of the East Indian family could be explained by the fact that most of the couples were young adults who had either married recently or just before emigrating to Canada. The larger size of the "Sikh" families can be explained by the presence of non-nuclear family members, for example, parents, brothers, sisters or other relatives, sometimes friends of the head or the wife of the head of the household (Chadnay,

1976). By following Rossi (1980) it can be stated that these families are in the early stages of their life-cycle when the propensity to move is usually very high (Rossi, 1980).

2.4 SOCIO-ECONOMIC CHARACTERISTICS

The present section of this chapter will analyze some of the basic socio-economic characteristics of East Indians in different Canadian cities. Like the demographic variables, only those socio-economic variables, which are related to intra-urban residential migration in North American cities have been selected for discussion. These are the level of education, occupational pattern, income, social network, housing and geographical distribution within different Canadian cities.

2.4.1 Educational Background

Literature on East Indians in Canadian cities does not provide sufficient information regarding the educational background of the earlier immigrants. However, Buchignani states that the majority of the initial East Indian immigrants could neither read, write nor speak English. Nevertheless, a small number of educated Indians also emigrated since 1907. Before the 1950's more than half of the East Indians in Canada were reported as unskilled labourers (Buchignani, 1980). The changes in immigration policy embodied in the regulations of 1962 have affected the immigration from East India to Canada, a change not only in

its volume, but its character as well. The 1962 policy placed emphasis on education, training, occupational skills or other special qualifications of persons who were expected to establish themselves in Canada. The majority of these new immigrants have received their formal education and training before arriving here.

The level of education among the East Indians appears to be exceptionally high. Pereira (1971) found that 76 per cent of East Indians in Winnipeg had 13 or more years of education. On the other hand, only 17.5 per cent of Canadian people had this level of education in 1969. However, he did not mention his method of selecting this scale for education.

Awan (1980: 244) also states that, most of the Pakistani immigrants are male and the majority of them are university graduates. He also mentions that they hold degrees in Physics, Economics, Engineering, Medicine, Law, Journalism, Mathematics, Accounting and Pure Sciences. Twenty-five per cent of East Indian immigrants in Windsor had University degrees in 1976 (Nizamuddin, 1976). More than 42 per cent of the Bangladeshi immigrants in Toronto have diplomas or degrees whereas this is true of only about 19 per cent of the total adult population of Toronto (Yasmin, 1982: 63). Yasmin also points out that twenty per cent of Bangladeshi immigrants in Toronto has at least a professional Bachelor's degree compared to less than one per cent of the Toronto population in 1982.

Educational achievement among the East Indian immigrants in different Canadian cities varies by sex. The statistics on the mean length of formal schooling for husbands and wives of the East Indian families in Saskatoon depicts that it was over 19 years for the husbands and about 15 years for the wives (Siddique, 1977: 180). This higher level of educational achievement of the males compared to the females of this community in different Canadian cities is strongly supported by many other researchers (Periera, 1971; Husaini, 1981; and Yasmin, 1982).

The level of education has been identified as one of the important factors which influences the mobility rate. The literature on migration indicates that mobility is positively related to the level of education. People with higher education are more mobile than people with lower education (De Jong and Gardner, 1981). In this regard it can be postulated that, as the educational level of East Indians is higher than that of the average Canadian living in a city, it is anticipated that they will be more mobile than the other Canadians in general.

2.4.2 Occupation

In the earliest period of arrival, the East Indians, mostly "Sikhs", found employment as unskilled labourers. However, the data on the occupational level of the earliest immigrants from East India are not adequate. The literature indicates that the majority of them were unskilled labourers

and most worked in the saw mills. Besides the saw mills, they worked in cement plants, cut wood and cleared land (Buchignani, 1980). Angus(1970) points out that the Canadian Census of 1951 shows that more than half of the East Indians lived on farms or the small towns and many of them worked in saw mills. Some of them had joined the professions, but their number was very small. In addition, this community, especially in Vancouver, had produced a few successful business men by that period. In the early sixties a small number of East Indian immigrants gradually established business in the forest industry (Cassin, 1977).

In the late sixties, with the change of immigration laws, the occupational pattern of this community's members also changed. Immigration Statistics Canada reveals that the intended occupation of a high percentage of immigrants from India, Pakistan, Srilanka and Bangladesh was managerial and professional. This was for the whole period of 1956-1980. However, the emphasis on managerial and professional jobs has changed over time. While in the 1956-61 period this category represents 39.5 per cent of East Indian immigrants destined to the labour force, by 1962-73 it had risen to 46 per cent and decreased to 27 per cent by 1974-80. On the other hand, the proportionate increased in the manufacturing, mechanical and construction category was about 9 per cent for the period 1956-61. This figure increased to about 18 per cent in the period of 1962-73 and eventually reached 26 per cent in the period 1970-80. Thus

the intended occupational pattern of this immigrant group has changed over time with a trend towards the manufacturing, mechanical and construction category of jobs. During the 1956-73 period, only 3.6 per cent of East Indian immigrants reported commerce and financial positions as an intended occupation. This group constituted 17 per cent of the East Indian immigrants during 1974-80.

Since the 1960s, the majority of the East Indians have arrived with higher levels of education and occupational skills. This permits a rapid entrance into the Canadian occupational system. As a result, today a relatively high percentage of the community members are in professional and managerial occupations in different Canadian cities.

Yasmin (1982) shows that 53 per cent of the Bangladeshi immigrants in Toronto (irrespective of male and female) was in professional and managerial occupations in 1981-82. However, all the males and 69 per cent of the females were employed. The occupational distribution of the Bangladeshi immigrants in Toronto also demonstrated a distinct variation in terms of sex. More than two thirds (67%) of the total male and about one third (29%) of the total female Bangladeshi labour force (employed persons) were holding professional and managerial positions in Toronto in 1981-82. The remaining per cent (71%) of the employed females was involved in clerical occupations (Yasmin, 1982: 70). Siddique (1977) in his study on the East Indian families in Saskatoon noted that only 17 per cent of the women were in

work force in 1973. He does not mention their occupational patterns. However, Siddique indicates that 48 per cent of the male members were holding professional jobs and another 44 per cent were in semi-professional jobs (Siddique, 1977: 180).

Periera's (1971) research findings show that among the East Indian immigrants in Winnipeg who had more than thirteen years of education, the majority were employed professionally in 1969. They found employment in universities as professors or researchers or in hospitals as doctors or in government offices as engineers or architects, lawyers, social workers and researchers. Some of them were employed by private enterprise in administrative capacities and in executive positions. A few, employed as laboratory technicians, are in service occupations. Pereira also indicates that the female members of this community with more than thirteen years of education were also employed professionally, as doctors, teachers, nurses and research workers (Periera, 1971). Nizamuddin (1977) states that about 47 per cent of the East Indian immigrants in Windsor in 1977 were unskilled workers and only about 22 per cent of them were professionals. At the same time, Cassin (1977) notes that a significant proportion of East Indians in Vancouver were involved in business in 1977. These include import/export businesses, stores specializing in Indian foods, resturants, travel agencies, real estate and insurance businesses. The research findings of Cassin's

study corresponds to the study of East Indians in New York, done by Saran and Leonhard-Spark (1980). The occupational pattern of East Indian immigrants in Winnipeg, Saskatoon, Windsor and Vancouver for these two different periods (1969-73 and 1974-77) also reflects the same pattern of the intended occupations of this immigrant group to Canada. The occupational pattern of Bangladeshi immigrants is an exception to this general trend. This can be explained in terms of their recency of migration as well as by their small numbers.

The literature shows, there is a high positive association between residential concentration and occupational concentration of the city dwellers (Jones, 1967: 419). In other words, city dwellers prefer to live in those areas of the city where people of the same occupational group reside irrespective of their ethnic background. Because of their diversified occupational structure, it is expected that the residential preferences and consequently the pattern of the intra-urban moves of the East Indians will be similar to the other city dwellers.

2.4.3 Income

East Indian immigrants are doing well economically. The literature survey reveals that the majority of immigrants from East India had relatively low incomes during the early part of their arrival in Canada. It can be stated that even though most of these immigrants are professionals, at the

time of arrival, they accepted comparatively low paying jobs. However, within a short period of time they adjusted themselves to the new environment and found better jobs with higher incomes. Husaini (1981) states that East Indians in their first year of migration were in the low income group of $5,370 for 1970, but over a period of three years, their income increased to $9,056 in 1972 (Husaini, 1981: 99). On the average they were in a higher income level than the urban population (Awan, 1980; Husaini, 1981; Yasmin, 1982).

With upward occupational mobility and high level of occupational status, often held by husbands and wives within the same family, the economic level of these households is comparatively high. For example, nearly 69 per cent of East Indian immigrants in Winnipeg were in the income bracket of $6,000-$12,000 and 21 per cent were earning more than $12,000 per year in 1969 (Periera,1971). The average Canadian household's income in 1969 was $8,733 and $5,000 was considered the upper limit of the low income household (Statistics Canada, 1969). Periera has identified the economic status of East Indians in Winnipeg as in the middle and higher middle income brackets. The mean income of the East Indian households in Saskatoon was $15,360 in 1973 (Siddique, 1977). The average family income in Canadian metropolitan areas was $9,600 in 1971 (Gertler and Crowley, 1977). Nizamuddin (1976) indicates that 85 per cent of East Indian immigrants in Windsor were in the income bracket of $6,000-$18,000. However, 11 per cent of these immigrants

were earning more than $18,000 per year in 1975.

Yasmin (1982) argues that 84 per cent of the Bangladeshi immigrants in Toronto earned anually more than $15,000 and 66 per cent of them were earning more than $20,000 in 1981. She also states that, this percentage is much higher than the five per cent of the employed population of Toronto C.M.A. within the same income group. This income group is identified as an upper middle income group in Canadian society.

The literature indicates that the intra-urban residential migration pattern largely depends on the economic condition of the household. It has been found that the middle income group moves to a greater extent than the lower and upper income group (Simmons and Baker, 1974). It is also argued that by making an intra-urban move, the middle income group generates an observable social change in the various neighborhoods (Simmons and Baker, 1974; Weinberg, 1979; and Bible and Brown, 1980). Therefore, with reference to economic status, it can be argued that the East Indian community in different Canadian urban centres is one of those groups which induce a change in the social structure of a neighborhood.

2.4.4 Social Network and Institution

There is no firm geographic community of East Indians in any urban centres of Canada. This is not to suggest that these immigrants lack the desire for proximity to their

ethnic friends. This desire to maintain contact with other East Indians is overcome by frequent visits and telephone calls and also by establishing formal ethnic associations (Husain, 1981; and Yasmin, 1982). The majority of the Canadian East Indians participate in extensive social networks of friends which provide the individual with the opportunity to interact with others. This social network provides the basis for reestablishing a feeling of community within an urban setting and it also serves to maintain individual self-identity (Buchignani, 1979).

Without a segregated residential area this community has viable identity in different urban centres of Canada through different specialized institutions. These include ethnic, cultural and social clubs and denominational churches. Some of these associations are mainly devoted to religious functions. The "Gurduara" religious institutions for the "Sikh" community is one of this type. There are some other associations which are devoted to religious and linguistic functions. Celebrating religious festivals and conducting classes in their own mother tongue are examples.

Upon arrival in Canada, the majority of the East Indians get in touch with their community members. Consequently, through different formal and informal associations they expand their range of acquaintances. Through this attachment the new immigrants are able to get different sorts of support while they establish themselves in the new urban setting. This support includes helping to

find a better job, a place to live, information regarding schooling and shopping centres. Buchignani (1979) reports that the family's friends often share the economic burden a new immigrants faces until his family has established a Canadian income and can repay a loan. Because of such strong community ties and tight social network, it is expected that the decision to change the residence and choice of destination of an East Indian household would be largely influenced by the other community members.

2.4.5 Housing

The housing conditions of the East Indian community in Canada is largely controlled by the income of the community members. Because of the lack of data, it is difficult to present the housing conditions of this community in any detail. It was mentioned earlier that the community members usually help the new immigrants to find a place to live. This is particularly true for those immigrants who have come as a result of chain migration. Cassin (1977) in his study of East Indians in Vancouver indicates that when a new immigrant joins his relatives who have sponsored him to Canada, he is taken care of by his Canadian relatives who introduces him to other members of the community. Cassin also added that many of the new immigrants stay temporarily with relatives while they make initial adjustments to the new society. They often live with the family until they get married or may move into a rental house or apartment with

other persons in a similar situation to themselve. Similar views prevail in Buchignani's (1979) study of "South Asian Canadians and the Ethnic Mosaic". In his study, Buchignani states that rental housing is often very expensive for newly arrived families. Therefore, some families share the house with other families to reduce their per capita expenses.

The majority of East Indians try to buy houses as soon as they are able to get financing to do so (Cassin, 1977; Husaini, 1981). Buchignani (1979) and Husaini (1981) have shown that the East Indian Canadians place a very high priority on home ownership and families commonly buy houses within three to five years of arriving in Canada. The richer relatives often lend money to the other relatives to buy houses far earlier than they would be able to if they were to depend entirely on their own resources (Cassin, 1977; and Buchignani, 1979).

When an individual decides to purchase a home, his choice will be greatly influenced by the experiences of his relatives and other community members. Often it is on the advice of the experienced community members that the newcomer will select the real estate agency and salesman, and in some special circumstances, the community members might begin to bargain on behalf of the buyer (Cassin, 1977).

2.4.6 Geographical Distribution

Unlike other immigrant groups, East Indian immigrants have resisted the pattern of organizing a clearly defined community for themselves within the larger community. Rather, they have spread themselves throughout the city areas, renting and owing private dwellings. Even in Vancouver, where the larger number of East Indians are living, there is no firm geographical community. However, there is a preference for East Indians to take up residence in Vancouver south and some parts of Richmond and Surrey. Chadnay (1976) identified a significant proportion of the "Sikh" living in Vancouver south. He gives two reasons for this concentration. Firstly, the presence of the lumber industry there that employ a significant number of "Sikhs". The other reason is that the new Gurdwara (religious institution) was built in that area. Nonetheless, both Chadnay (1976) and Cassin (1979) agree that these areas where East Indians tend to concentrate are also the residential areas of middle class Canadian citizens. Such opinions also are reflected in other studies on East Indians in Canada (Pereira, 1971; Buchignani, 1979; Awan, 1980; and Yasmin, 1982).

Pereira (1971) indicates that in Winnipeg the greater number of immigrants appear to reside in the St.James-Assiniboia municipality. But this should not indicate the formation of an Indian ghetto in Winnipeg. Immigrants seek residences where they can afford to buy or rent a house. The

clustering in the St.James-Assiniboia area is understandable as it is traditionally the residential districts of middle and upper middle class Canadians (Pereira, 1971). This clusturing indicates that, like other Canadians, the East Indian immigrants reside in those areas where they can afford to rent or buy a house. As mentioned earlier, in reference to income East Indians in Winnipeg were synonymous with the middle income range Canadian people in 1969 (see page 47).

Yasmin (1982) suggests that the price of housing and proximity to work seems to be the main determinants for the distribution of the Bangladeshi immigrants in Toronto. She also states, "Most of them upon arrival, live in apartments or rooming houses in the down town area of Toronto city. With their gradual control over the socio-economic situation, they gradually move to better residences in the outskirts of the city. On the whole, their settlement pattern appears to be concentrated in Mississauga and Scarborough but even within these areas, one can rarely find two households living on the same street" (Yasmin, 1982: 61-63). From these studies it can be asserted that, the economic capacity of the people appears to be one of the most important factors attributing to the settlement patterns of East Indian people.

As the distribution pattern of the East Indian immigrants is largely controlled by its economic status, it is expected that they would also behave like other city

dwellers in changing their place of residence. On this point Awan (1980) states, "Pakistani immigrants have spread themselves throughout the city areas renting or owning private dwellings and this helped them to facilitate their assimilation into the Canadian life-style" (Awan, 1980:243). This statement leads us to hypothesize that, with assimilation into the Canadian life-style, East Indians react to the common aspects of the migration decision in much the same way as any other Canadian. One further point relevant to their housing requirements is made by Buchignani (1980). He states that when the East Indians decide to own a house, they prefer to buy a new one rather than a used one. Therefore, it is anticipated that, for the East Indian movers, a "new house" would be one influential factor in the selection of their destination in the city.

2.5 EAST INDIANS IN EDMONTON

The number of East Indians in Alberta has been increasing very rapidly since the late 1950s (Husaini, 1981). The size of this community has increased with the increase of in migration to this province from other parts of Canada and of immigrants from abroad. At present, about 11 per cent of the Canadian East Indians are living in Alberta. Of these, 43 per cent are living in Edmonton (1981 Census). The Census now uses mother tongue to distinguish between the various ethnic groups. It included as East Indians those speaking Bengali, Hindi, Urdu, Punjabi,Tamil,

Telegu, Cengalese, Malayalam and Indo-Pakistani languages. There were recorded in this way 5,440 East Indian people in Edmonton. This group constitutes one per cent of the city population.

The data for this community in Edmonton are not adequate. The research work done by Husaini (1981) provides some information regarding East Indian working women, their families and their social network. However, these data are not adequate to portray a detailed picture of the demographic and socio-economic character of the whole community in Edmonton. This section of the chapter is designed to give a general profile of East Indians in Edmonton on the basis of Husiani's (1981) research findings. This section will also include the distribution pattern of East Indians in Edmonton in 1982. The sources of the data are the membership lists of different East Indian ethnic associations.

Like other overseas immigrants, East Indians in Edmonton are predomonantly young males. Husaini found very few East Indians in Edmonton were Canadian born or old persons. It seems that almost the whole community consists of post-World War II immigrants most of whom came in the sixties or early seventies (Bowerman, 1980; and Husaini, 1981). Forty-six per cent of the East Indian working women are between 26-35 years of age. Among these working women 75 per cent have one or two children. The study did not indicate the average age, sex composition, marital status

and family size of this community.

High educational background is one of the notable characteristics of the East Indians in different Canadian cities. The East Indians in Edmonton are not an exception to this. Bowerman (1980) notes that many persons are qualified in the Social Sciences. Bowerman showed that their qualifications exceed the job requirements. Hasaini (1981) showed that among the East Indian working women's family members in Edmonton, 60 per cent of the men and 35 per cent of the women have degrees or post graduate training. Sixty per cent of the men of these households are professionally employed, including doctors, engineers, professors, researchers and lawyers. There is also a marked difference between the husband's and wives's educational and professional acheivements. Apart from the fact that over two thirds of the women have degrees the majority of them are employed in unskilled and semi-skilled manual occupations and 23 per cent of them are engaged in clerical and technical work (Husini, 1981).

Husaini found that 80 per cent of the heads of the East Indian households earned more than $11,000 a year in 1979. Of the total,30 per cent earned between $11,001 and $16,000 per annum. She also mentions that 45 per cent of the East Indian men in Edmonton earned more than $16,000 a year in 1979. However, income of the working women is not mentioned and therefore it is not possible to estimate the total household income of this community. In 1979, the mean and

median income of the male members of Canadian households were $14,981 and $14,237 respectively. Based on Husaini's findings,the income of East Indians in Edmonton was much the same as the median income of other Canadians in 1979.

From the above discussion it can be stated that East Indians in Edmonton are not necessarily different in many respects from other East Indians in other Canadian cities. The socio-economic characteristics of this community places them in the middle income professional group in Edmonton.

Like other Canadian cities, Edmonton does not possess any segregated residential district of East Indians. Nevertheless, the presence of a significant number of East Indian families in certain residential areas of the city is not uncommon. The distribution pattern is not even with East Indian families living in all parts of the city.

East Indians in Edmonton maintain a strong social network among themselves through different ethnic organizations or associations. There are 21 associations for the different groups of the East Indian community in Edmonton. According to geographical region these associations can be devided into three groups, 17 for Indian, three for Pakistani and one for Bangladeshi people. According to the membership lists of these associations, 626 East Indian families are attached to at least one of these associations. Some families are also members of more than one associations. For the purpose of this study, membership in one association has been considered. The executive

members of these associations have said that not all the East Indians in Edmonton are members. However, they claimed that more than 90 per cent of the East Indians living in Edmonton are members of at one of these associations. Therefore, it is reasonable to consider the addresses of these members as the best available sources of data to indicate the distribution pattern of this community in Edmonton. Since the Srilankan people do not have any ethnic association in Edmonton, addresses of 50 Srilankan families were collected from two different sources. Firstly, by consulting the personal telephone directories of some Srilankan people in Edmonton. Secondly, from the telephone directory of the City of Edmonton 1982, by following some common Srilankan last names (detail in chapter four).

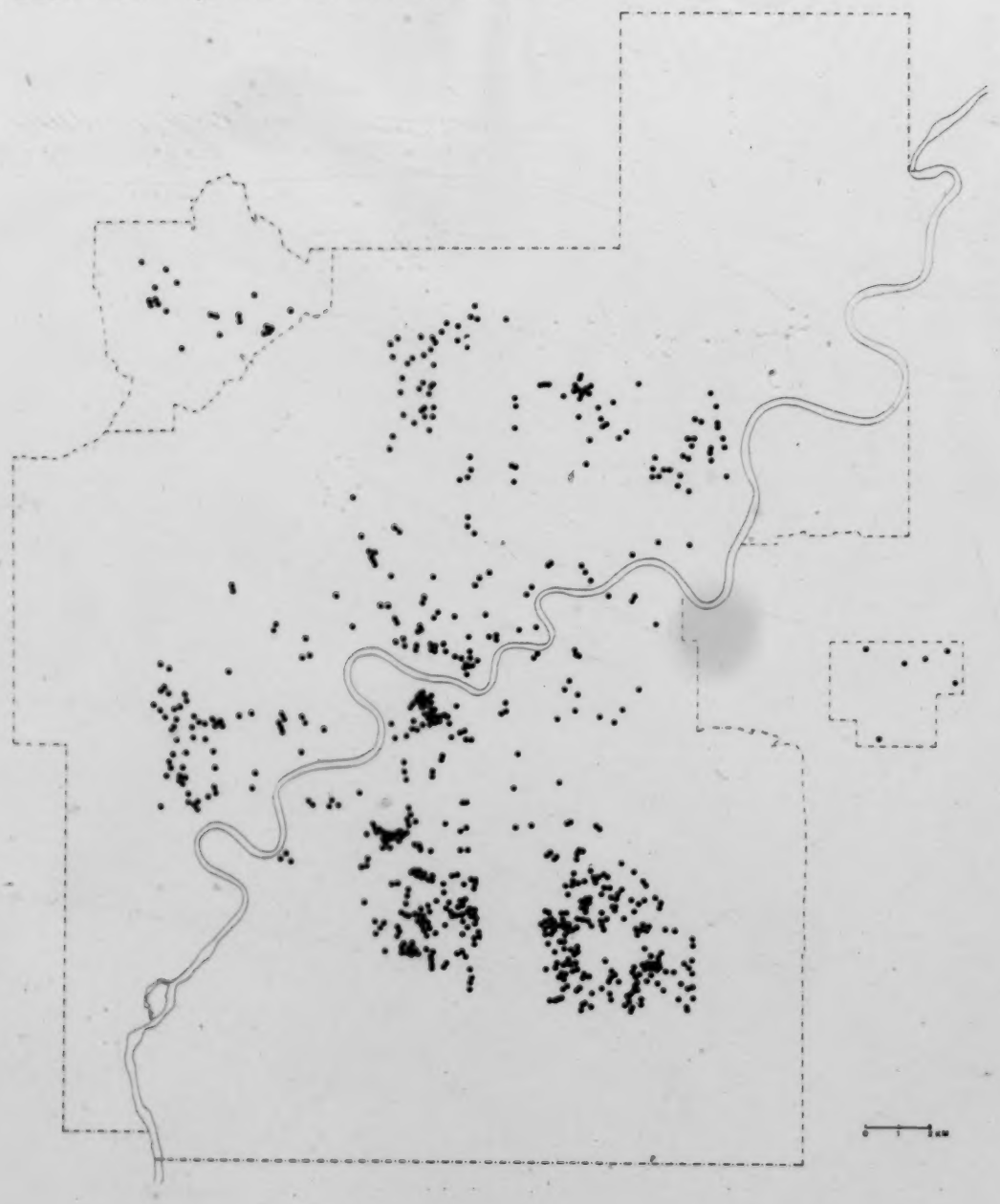
All the addresses of the East Indian families are plotted on a street map of Edmonton (Figure 2.3). The distribution pattern shows these people live in all parts of the city with higher concentrations in the southern, western, northern and north eastern peripherial suburbs. There is also some clusturing near the university area and in Malmo Plain. At this scale the distribution pattern shows neither a segregated residential area in the city nor a concentration in the inner section of the city. It also does not correspond to Davies' findings on the distribution pattern of Asian ethnic groups in Edmonton (Davies, 1978).

In 1982, the majority of the East Indians in Edmonton were found in those areas of the city which have been

FIGURE 2.3

DISTRIBUTION PATTERN OF EAST INDIAN HOUSEHOLDS IN EDMONTON, 1982.

Each dot represents one household.



Source: Association Membership Lists

developing since the early 1970s (Edmonton General Plan, 1979). A significant number of community members are found in the residential areas that were developed after 1977. These areas are in the suburbs of Castledown, Clarview, Steel Height, Kaskatayo, West Jasper Place and Millwoods (City of Edmonton Planning Department, 1979).

The City of Edmonton (1981) has published statistics on the housing stock in some selected residential areas in the city of Edmonton for 1981. According to that report, total housing stock (including single family unit, row house,apartment) was highest in Millwoods (17,500) followed by West Jasper Place (11,048); Clareview, Hermitage Steel Height (9,285); Castledown (8,083), Kaskatayo and Twin Brook (6,902); and Riverbend (2,670) and lowest in Lake district (289). In reference to that report, it can be stated here that the concentration of East Indians are in those areas where the numbers of housing are comparatively higher than the other areas of the city. In other words, their spatial distribution pattern is influenced by the housing opportunities in different residential areas of the city.

Davies (1978) recognizes sectoral pattern of socio-economic status in Edmonton. These newly developed areas where most of the East Indians live were not included in that analysis. By following the sectoral pattern identified by Davies, we can tentatively stated that the majority of the East Indians live in the middle class residential areas of Edmonton. However, some members of this

community live in the Riverbend, Grand View, Westbrook,and Capitol Hill residential areas (Figure 2.3). Fairbairn (1978) identifies these areas as the high class residential area of Edmonton. Some of the East Indians also live in those areas which were identified as the low class residential areas by Davies (1978). These areas are Norwood and Parkland.

Larson (1979) reports on comparative housing costs in four residential ares of Edmonton for 1978. According to that report, prices of houses were highest in Petrolia followed by Rio-Terrace and Londonderry and lowest in Millwoods. The Royal Trust (Realtor) has conducted a survey on housing prices of selected residential districts in different urban centres of Canada in October, 1983. In that survey only nine residential districts of Edmonton were considered. According to that survey prices of houses were heighest in Valley View/Glenora followed by Riverbend/Grand View; West End; Petrolia; Sherwood park; St. Albert; and Castledown and lowest in Clarview and Millwoods (Royal Trust Survey of Canadian House Prices, 1983). From the above discussion it can be stated that East Indians in Edmonton have a tendency to settle down in those suburbs where housing is comparatively cheaper than that of other residential areas of the city. The presence of East Indians arround the university and Malmo Plain area (Figure 2.3) can be explained by the presence of university housing. In general it can be asserted that the majority of the East

Indians live in the housing that on the average tends towards the lower end of the value scale.

As noted in chapter one (see page 12), Davies (1978) has identified that family status depicts a concentric pattern of residential development in Edmonton. This is concentrically arranged around the city centre with low status at the centre and high family status on the city periphery. By following Davies' research findings, it can be shown that the majority of the East Indians in Edmonton live in those areas where family status is high.

From the above discussion it can be concluded that most of the East Indians in Edmonton live in newly developed residential areas, at the edge of the city and with a tendency towards the areas where the housing available are comparatively higher and prices are comparatively lower than the other residential districts of the city. The majority of them live in those areas where the raising of a family is important.

2.6 SUMMARY

The term "East Indian" as used in this study refers to persons whose country of birth is India, Pakistan, Srilanka and Bangladesh. Migration of persons from East India to Canada is more than half a century old. Like other Asians they first came in the late nineteenth century and settled on the Pacific coast, particularly in British Columbia. The number of East Indian immigrants increased over time but the

rate of inflow was directly related to the Canadian Immigration Laws. The literature survey reveals that the immigrants from East India are seen as an independent social and cultural community, existing within the modern industrial setting of Canada.

In the early period, i.e. late 19th and early 20th century, almost all of these immigrants were male and unskilled. But after 1947, because of the change in immigration laws the number and characteristics of the East Indian immigrants also changed. The East Indians constituted about 5 per cent of the total immigrants to Canada during the period of 1956-80 (Statistics Canada).

The changes of immigration policy embodied in the regulations of 1947 as well as 1962 have affected immigration from East India. The change of immigrants is not only in its volume but its character. Pannu (1966) states that as a result of this immigration policy of 1962, the proportion of professionals and skilled persons among the Indian immigrants has sharply increased.

The literature on East Indians in Canadian cities indicates that like all other immigrants, the majority of them are relatively young and predominantly male. These immigrants have a much higher married to single ratio than other city dwellers. It follows that the change in household structure which might affect housing needs is also higher for this community. Most of the families are small. The small size of the family could be explained by the fact that

most of the couples are young adults who have either married recently or just before emigration (Periera, 1971). By following Rossi (1980) it can be stated that these families are in their early life-cycle and thus are potentially highly mobile.

The larger population centres have been popular areas for settlement of East Indians in Canada (Awan, 1980). The literature on the East Indian community reveals that they are distributed throughout the city and do not have any organized and clearly defined community for themselves. Most of them live in the middle class residential areas of the city. Their distribution pattern in different Canadian cities can be explained in terms of their ability to afford to buy or rent a house. The majority of Canadian East Indians are professionals with high educational backgrounds. Their average income is much the same as the average income of the Canadian household. Their social networks are maintained through social visits as well as through ethnic associations.

More than 10 per cent of Canadian East Indians (whose mother tongue is one of the East Indian languages) are now living in the province of Alberta. About 50 per cent of them i.e. about 5,000, is living in Edmonton (Census of Canada, 1981). The East Indians in Edmonton do not live in a segregated residential area but they maintain their ethnic ties through different ethnic associations. In Edmonton they live mostly in newly developed residential areas in the

peripheral suburbs of the city. These are identified as the middle class residetial areas of Edmonton. Some of them live in upper and some live in lower class residential areas. In general it can be stated that the majority of them live in those areas where available of housing is relatively higher and housing price is relatively lower than other residential districts of the city.

3. INTRA-URBAN RESIDENTIAL MIGRATION

This chapter is concerned with the life-cycle and intra-urban residential migration in North American cities. The life-cycle approach is going to be used for the investigation of the intra-urban mobility pattern of East Indians in Edmonton. The particular approach has been considered here primarily for two reasons. Firstly, with reference to the demographic and socio-economic characteristics of the East Indians in different Canadian cities and their spatial distribution pattern in Edmonton which are shown in chapter two, the East Indians are not that different from the other urban dwellers. Therefore, it is hypothesized that the aspects of their intra-urban migration would be similar to that of the other people in the city. Secondly, the literature on intra-urban migration recognizes the overwhelming importance of the life-cycle of the household as a determinant of intra-urban migration. East Indian households also pass through different stages of the life-cycle much the same way everyone else does in the city. It is likely therefore, that the life-cycle would also be the most powerful inducement to cause these people to change their residence within the city.

This chapter comprises three parts. The first part will concentrate on the terms and taxonomies used by different researchers to describe various stages of the life-cycle. This section will also include a discussion on the change of

residential preferences with the change of life-cycle. The second part of this chapter will concentrate on who moves, why do they move and where do they move in North American cities. This analysis will illustrate the influences of the stages of the life-cycle on intra-urban residential migration pattern in North American cities. Finally, in the last section, the research expectations are presented which are the outcome of the analysis in the earlier sections of this chapter.

3.1 THE FAMILY LIFE-CYCLE

The family life-cycle is the most frequently used term in the field of residential migration. This term is used to describe the different stages through which a family goes from formation to dissolution. In general, seven stages of the life-cycle have been considered by researchers. They have suggested several taxonomies to describe these seven stages of household progression. The taxonomies which are generally utilized in the analysis of household mobility have been suggested by Glick (1947), Lansing and Kish (1957) and Abu-Lughood and Foley (1960). These definitions have been summerized by Weinberg and Quigley (1977). Table 3.1 depicts the list of these definitions.

These taxonomies are widely used in the literature but there is little substantive comments to permit a comparative analysis of these alternative definitions. However the researchers have used typically similar variables to

TABLE 3.1

TAXONOMIES OF THE HOUSEHOLD LIFE-CYCLE.

Stages of the life-cycle	Glick (1947)	Lansing and Kish (1957)	Abu-Lughood and Foley (1960)
1.	Newly married	Young married	Married
2.	Married, awaiting birth of first child	Young married, no children	Pre-child
3.	Married, awaiting birth of last child	Married with child under 6 years	Child-bearing
4.	Married, awaiting marriage of first child	Married with all children over 6 years	Child-rearing
5.	Married, awaiting marriage of last child	Older married with children	Child-launching
6.	Married, before the death of one spouse	Older married without children	Post-child
7.	Widowhood	Older single	Later-life/ Widowhood

Source: Weinberg, D.H. and Quigley, J. M. (1977): 51

University of Alberta

categorize the life-cycle. These variables are the number of family members, their ages, blood relationships and marital status. Although various taxonomies have been suggested from a similar perspective, the researchers have used different criteria to differentiate the stages of the life-cycle. For example, Glick (1947) emphasises the birth, marriage of first and last child of the family to distinguish between the stages. Lansing and Kish (1957)have placed the emphasis on the age of the children and couple with or without children regardless of the first or the last child. Abu-Lughood and Foley (1960) had defined the stages more broadly not stating any specific criteria.

Among the life-cycle definitions utilized in the analysis of household mobility, the definitions suggested by Abu-Lughood and Foley (1960) will be employed in this study. Although it is expected that each household would go through these seven stages, in reality not all households do. Some couples remain childless and for some the seventh stage may precede others due to death or divorce (see Table 3.1).

The literature demonstrates that the household's housing needs and aspirations are also different in the various stages of the life-cycle. The household's housing needs and locational preferences are the result of a multitude or complex forces. From the household's point of view, four aspects of these needs and locational preferences are paramount. The first group involves the number of family members and their ages. The second involves the space of the

dwelling unit. The third and fourth involve the location of the house with respect to other features of the urban area and characteristics of the dwelling unit itself. Changes in housing needs and aspirations in various stages of the life-cycle have been suggested by several researchers (Abu-Lughood and Foley, 1960; Hawley, 1971; Johnston, 1971; Lukomskyj, 1974; Weinberg and Quigley, 1977; Short, 1978; and Rossi, 1980). The association between housing needs and different stages of the life-cycle is summarized and presented in Table 3.2.

Table 3.2 indicates the expected change of housing needs and aspirations associated with changes in life-cycle of a middle income household. It is expected that the income of the household is fairly low in the early stages, it increases gradually and reaches the maximum level in the child-launching stage. Of course, not all the households have the same aspirations regarding housing, not all of them have low incomes in the early stages and not all of them will improve their economic condition. Some households remain in the city centre and some in the suburbs for the length of their lives.

Johnston (1971) analyses the important factors causing a change in housing aspirations as the household passes through different stages of the life-cycle, by following Abu-Lughood and Foley's (1960) model. This section of the chapter presents Johnston's view of association between life-cycle and housing aspirations.

TABLE 3.2

HOUSING NEEDS/ASPIRATIONS ASSOCIATED WITH DIFFERENT STAGES OF THE LIFE-CYCLE

Stages in the life-cycle	Housing needs/aspirations
1. Marriage	Relatively cheap, cetral city apartment
2. Pre-child	Relatively cheap, central city apartment
3. Child-bearing	Renting a single family dwelling, close to apartment zone.
4. Child-rearing	Ownership of relatively new suburban home.
5. Child-launching	Same area as 4) or perhaps move to higher status area.
6. Post-child	Marked by residential stability.
7. Later-life	Institution/apartment/live with children

Source: Johnston, 1971; Lukomskyj, 1974; Goodman, 1978; Short, 1978.

University of Alberta

3.1.1 1. Marriage Stage and 2. Pre-child Stage

In these stages, usually the family members are in their early twenties or older and the household prefers to live in inner city apartments. Demand is higher for better accessibility to the inner city than for dwelling space. It is likely that, both of the family members spend most of their time away from home at work and at some recreational centre during their leisure time. At the early stage of the head of the household's career, the income and the accumulated savings are likely to be too low to purchase a house. Therefore, home purchase is not likely in this stage.

3.1.2 3. Child-bearing Stage

In this stage the household is comprised of adults in the late twenties or older and children up to the age of ten years (Glick, 1957; Foote et al , 1960; and Lukomskyj, 1974). It is likely that in this stage, the household will change its residence from a small to a larger one. It is more likely that the household will move from an apartment to a house. Because, this is the stage in the life-cycle when the size of the household increases very rapidly, space demands increase with the growth in the household size and the need for accessibility to the inner city is no longer as important as previously. The family members, especially the wife and children, spend most of their time at home. With the higher demand for space, the household prefers to move to a house. Since the household cannot afford to buy a

house, it will rent a cheap single dwelling unit close to the apartment zone but away from the centre of the city.

The household prefers to move to a neighborhood where other households are in the same stage of their life-cycle. A good and safe environment for the children are considered very important in choosing the neighborhood (Simmons, 1968; Lukomskyj, 1974; and Rossi, 1980).

3.1.3 4. Child-rearing Stage

In this stage family expansion usually ceases. However, as the children mature, the demand for more space is still high. The household becomes more sensitive to the surrounding environment than accessibility to the work place of the head of the household. The type of people in the neighborhood, accessibility to better schools and to educational and recreational centres become very important. The real income of the household is comparatively higher than before. Home ownership, security and stability become important features of family life. As a result, in this stage the houshold prefers to move to the suburbs and buy a relatively new suburban home.

3.1.4 5. Child-launching Stage

As the children progress through their teens space demands are still high. In this stage, the real income of the household usually reaches its maximum level. Consequently, the household prefers to move to a better

house with better neighborhood characteristics. Because of neighborhood ties and the problem of uprooting the children from their school and friends, it is likely that the household would change residence within the same general area of the city but to a neighborhood with a comparatively higher socio-economic status.

3.1.5 6. Post-child Stage

In this stage the children reach their adulthood. The beginning of the children's young adulthood years are usually marked by their departure from their parent's home. As a result, the spacious home is no longer essential for a household with older persons. In this stage, the family members have strong psychological attachments to the home and neighborhood. They also want to enjoy its space and retain it for visits by the children and grandchildren. Therefore, the household prefers to stay where it is and this stage is marked as one of housing stability.

3.1.6 7. Later-life Stage

In this stage, usually the family disolves because of the death of one of the family members. In this stage, the survivor usually prefers to move to its children's home, to an inner city apartment or to an old folk institution. In this stage, it is difficult for the survivor to lead an independent existence in a suburban home. Close proximity to a shopping centre and recreational centre become very

important for easy movement and to spend leisure time.

From the above discussion it can be concluded that because of different housing aspirations, the changes in the life-cycle both precipitate movement and determine the destination of their movement. Because of a change in space demands and ownership aspirations, the probability of a change in residence is very high in the child-bearing and child-rearing stages. Although the overall direction of the movement is outwards, towards the suburbs, it is not directly from the city centre to the suburbs but gradually in stages.

Since, the life-cycle approach is going to be used for the analysis of the mobility pattern of East Indians in Edmonton, it was necessary to review recent information on the association between the life-cycle and intra-urban residential migration in North American cities. In order to have a more comprehensive perspective on the impact of the life-cycle on the intra-urban mobility pattern, the next section will survey the available evidence on intra-urban residential migration with reference to who moves, why do they move and where do they move.

3.2 WHO MOVES?

Most of the moves that occur in metropolitan areas are concentrated among certain segments of the population. The literature indicates that stage of the life-cycle is one of the important determining factors distinguishing between the

stable and mobile households. Rossi (1980) states, "---the major function of mobility is the process by which families adjust their housing to the housing needs that are generated by the shifts in family composition that accompany life-cycle change." (Rossi, 1980: 61). This is more certain for families with heads between 25 and 45 years and for those families which have been formed within one decade, the period during which most expansion in family size takes place (Moore, 1972; Lukomskyj, 1974; Simmons and Baker, 1974; Weinberg and Quigley, 1977; and Rossi, 1980). Therefore, one of the aims of this study is to examine the age of the head of the East Indian households which have changed their residence in Edmonton since their arrival in the city. It is expected that, the age of the majority of the heads of households will be within the age group of 25-45 years.

Household composition and size have been found to be important determinants of mobility; large families are more likely to move than smaller ones, but very large families are less mobile. Households are more likely to move when they experience certain changes in family composition e.g. household size, age, marital status, occupation of the members of the household (McCracken, 1973; Lukomskyj, 1974; Simmons and Baker, 1974; Weinberg and Quigley, 1977; Clark, 1980; and Rossi,1980).

From two independent studies, both McCracken (1973) and Lukomskyj (1974) have concluded that in Edmonton, most

mobile households are those which have increased in size. Consequently it is anticipated that the majority of the East Indian households which have changed their residence within Edmonton have increased in size, either by birth of a child or by family members joining the head of the household from the home country.

The majority of the moves that take place within metropolitan areas are by renters. The renters of North American metropolitan areas are about four times as likely to move in any year as are owners (Golledge and King, 1978; Goodman, 1978; and Weinberg,1979). A significant proportion of the renter movers are those who have aspirations to own a home (Rossi, 1980). McCracken (1973) indicates that 22 per cent of the movers in Edmonton have ownership aspirations. It is likely that the majority of the East Indian movers in Edmonton are renters and have aspirations to become an owner.

There is a general association between migration and upward vertical mobility. Households usually move to better housing to improve their quality of life as income increases (Clark, 1980). Middle income households are most mobile, largely because of their higher rate of rentership and specifically for the wider range of housing opportunities, e.g. median value homes are more available than either lower or higher priced homes (Goodman, 1978; Weinberg, 1979; Bible and Brown, 1980; and Gordon and Vickerman, 1982). The middle income group is characterized by upward social mobility

which generates an aspiration to change the neighborhood. This is particularly true of middle income professionals (Simmons and Baker, 1974; and DeJong and Fawcett, 1981). Therefore, it is anticipated that the majority of the East Indian movers in Edmonton will be middle income professionals and like other movers in the city they have experienced an improved economic status. Consequently they aspire to improve their neighborhood location.

From the above survey of the literature it can be concluded that the households headed by those persons who are in the age group of 25-45 are most mobile. Renters are more mobile than owners. Mobility rates are higher for those households who have experienced an increase in their household size as well as economic status. As stated in chapter two with reference to demographic and socio-economic characteristics, East Indians in different Canadian cities are not different from other city dwellers. It is also found that according to the spatial distribution pattern, East Indians in Edmonton are distributed all over the city. However, it is reasonable to expect that according to the demographic and socio-economic characteristics, East Indians in Edmonton are also similar to other people in the city. If they are similar to other urban dwellers, it is hypothesized that East Indian movers have similar demographic and socio-economic characteristics to other movers in the city.

3.3 WHY DO PEOPLE MOVE?

Wolpert (1965) has developed the concept of "Place Utility" which refers to the individual's personal evaluation of the attractiveness of a location relative to other locations. According to Wolpert, if a household experiences sufficient dissatisfaction from residing in a particular location, compared to others, the household intends to move. Golledge and King (1978) have mentioned that most of the intra-urban relocation is in response to push rather than the pull factors. In this context on the one hand, "push" refers to a combination of uprooting forces or impulses namely the negative aspects which force the household to leave the earlier residence and urge it to go to another one. Examples would include eviction due to commercial or industrial invasion and detorioration in the quality of the neighborhood. On the other hand, "Pull" refers to the attraction forces and features of the destination. These would include, for example, the pleasantness of the neighborhood in which dwelling unit is located and the better quality of the facilities found there (Colby, 1959 and Morrison, 1977). Thus, the fundamental reason for a move is to maintain or improve the quality of life for the household (DeJong and Gardner, 1981).

According to Willis (1974) the motive to move is in dissatisfaction with the present situation, particularly as demonstrated in the perceived disparity of opportunities at the place of origin and other places of the city and the

expected improvement that would result from migration. These opportunities are aspects of either socio-economic or the physical environments or both. The socio-economic aspects include the economic valuation of the dwelling unit, socio-economic status of the neighborhood and social environment of the neighborhood. The physical environment refers to the size, type and age of the dwelling unit, accessibility characteristics of the neighborhood including proximity to school, work, shopping centre, recreational centres and other parts of the city. However, these aspects are related to the stages of the life-cycle of a household. For example, the household requires more dwelling space in the child-bearing and child-rearing stages than those in the marriage and pre-child stages. Socio-economic status of the neighborhood is much more important for the households in the child-rearing and child-launching stages rather than those in the pre-child and child-bearing stages of their life-cycles. This study will investigate the causal factors of the moves made by East Indians in Edmonton. It is anticipated that, dissatisfaction at the origin will be of a socio-economic and physical nature and these arise through the changes in the stages of the life-cycle of a household.

In general most of the residential relocation within metropolitan areas is housing related and caused by the change of housing needs with the change of life-cycle. The common reasons are for more dwelling space for the household, desire for a better place in which to live

(physical structure of the dwelling unit, accessibility and socio-economic status of the neighborhood) and desire to purchase a home. Other reasons are: change of marital status i.e. to marry; to divorce, to be separated ; to leave the parents home (Weinberg and Quigley, 1977; Goodman, 1978, and Kennedy, 1979). McCracken's study on intra-urban migration in Edmonton proves that intra-urban migration is largely an adaptive response to changing housing needs. Small size of the dwelling for the household is the main reason for the moves of more than 40 per cent of the movers in Edmonton (McCracken, 1973). It is likely that shortage of dwelling space for the household is the most important reason for the moves of the majority of the East Indian movers in Edmonton.

With the change of household structure, particularly with an increase in family size, the household may consider moving. In this case renters are more mobile than the owners, mainly because their moving-costs are much lower than home owning households. Maisel (1966) suggests that a family already owning a home is less likely to move because it has made a major capital investment. McCracken (1973) indicated that, the desire to purchase a home is the second most frequently cited reason for moving in Edmonton. It is expected then that, the desire to buy a home is also an important reason for the relocation decision of East Indians in Edmonton.

Accessibility to work, shopping centre, school, playground, social institutions and medical services

strongly influences the migration decision (Moore,1972, Brown, 1975; and Weinberg, 1979). McCracken (1973) used journey to work as a variable to investigate the causal factors for the intra-urban residential migration in Edmonton. In his study journey to work was mentioned by 16 and 23 per cent of the movers as an important causal factor for the migration decision and in the choice of destination respectively. Although the influence of general accessibility (to school, social institutions, shopping centres, other parts of the city) in the migration decision is not mentioned in the study, it was found that it has a great influence on the selection of the destination by seven per cent of the movers. It is expected also that the migration decision of the East Indian households will be influenced by the accessibility of the neighborhood to school, shopping centres, social institutions, friends and relatives, recreational centres and other parts of the city.

In brief it can be said that dissatisfaction at the place of origin is the main reason for a move. Dissatisfaction might be in reference to either socio-economic or the physical features of the environment or both. The most pronounced causes are demand for more dwelling space , desire to buy a house and desire to change the neighborhood. It is shown in chapter two that the residential distribution pattern of East Indians in Edmonton is not that different from other people in the city. Therefore, it is likely that the reasons for the change of

residence of the East Indian households in Edmonton would be similar to other movers in the city.

3.4 WHERE DO THEY MOVE?

Various types of households change their residence in the city and obviously in various directions. The final destinations of the moves depend on the reasons behind the move, the aspirations for the move and the available housing opportunities.

From two independent studies both Clark (1980) and Goodman (1978) have concluded that the majority of the moves are within the same neighborhoods or towards those neighborhoods which are nearby. The household generally moves to the neighborhood of higher or at least the same socio-economic status. It is likely that East Indians would also move to a neighborhood with higher or at least the same (to them) socio-economic status.

The mobility pattern of any metropolitan area is highly controlled by the housing opportunities. Generally, growing metropolitan areas, like Edmonton, have more housing opportunities than the stagnant ones like the city of St.Louis (Goodman, 1978). The wider range of opportunities allow movers to obtain a better approximation of a specific combination of dwelling unit, neighborhood and locational features that they seek (Goodman, 1978; and Gordon and Vickerman, 1982). The presence of East Indians in the newly developed residential areas of Edmonton (Figure 2.3) might

indicate the influence of the housing opportunities there on their mobility patterns.

It follows from the findings on location of origin, destination, distance and direction of the moves and the structure of the city that the majority of the intra-urban moves are short in distance. The distance of the move is also related to the place of origin. Moves originating in the inner zones of the city are usually short in distance. Distance of move increases with the change of origin from inner to the outer zone of the city (Simmons and Baker, 1974; and Goodman, 1978). From the Edmonton study McCracken (1973) concludes that the household's movements in Edmonton are generally short distance in nature and inner city movers usually move a shorter distance than the outer city movers. Consequently it is hypothesized here that the majority of the moves of East Indian households in Edmonton will be short in distance and the distance of the moves will increase as the origin moves from the inner to the outer zone of the city.

The direction and flow pattern of migration also depends on the characteristics of the migrating households. Simmons and Baker's study on the residential movement pattern in metropolitan Toronto shows different flow patterns for the households in different stages of the life-cycle. In general, the households which are in the third and fourth stages of their life-cycle move towards the periphery of the city irrespective of the origin of the move

(Simmons and Baker, 1974). In order to investigate the impact of the life-cycle on intra-urban migration in Edmonton, Lukomskyj (1974) analyses the flow pattern of the households which are in the child-bearing stage of their life-cycle. From his research findings, Lukomskyj concludes that, for this sub-population, most of the moves terminate in the outer areas of the city regardless of their origin (Lukomskyj, 1974). The literature on Canadian East Indians indicates that their household characteristics are similar to those who are in the child-bearing and child-rearing stages of their life-cycle. Therefore, it is expected that the East Indians in Edmonton are also predominantly in these stages of their life-cycle and consequently their intra-urban moves will terminate in the outer areas of the city.

However, it can be concluded that most of the intra-urban moves in North American cities are short distance, to places within the same or adjacent neighborhoods of higher or at least the same socio-economic status. The moves originated at the inner part of the city are usually shorter in distance and they increase with the shift of origin from inner to outer parts of the city. However the housing opportunities in the city have a great impact on the mobility pattern of any city. As shown in chapter two, with reference to the spatial distribution pattern, East Indians in Edmonton occur in all neighborhood of the city. Therefore, it is likely that the mobility

pattern of the East Indian households in Edmonton would be similar to other movers in the city.

3.5 SUMMARY

The term "life-cycle" is widely used in the field of migration research. Since the 1940's different taxonomies have been used by the researchers to explain the seven stages of the life-cycle, from formation to dissolution of a family. With the change of life-cycle, housing aspirations of a household also change. With the change of household composition and socio-economic status in different stages of the life-cycle the household usually experiences certain dissatisfactions with socio-economic as well as the physical environment. This is more certain in the child-bearing and child-rearing stages. In these stages the household becomes more sensitive to both the physical and socio-economic environment. For example, with an increase of family size, more dwelling space is needed and a good neighborhood in which to raise the child is desirable. This is also the stage when the socio-economic status of the household is usually better than that of earlier stages. The housing needs and aspirations also change in different stages of the life-cycle of a household. Consequently, the household changes its residence as well as neighborhood.

The characteristics of the migrants, the reasons behind the migration decision and direction of the moves have been analyzed by researchers from a multi-disciplinary point of

view. Most of them have concluded that the stages of the life-cycle are the most dominant causal factors for intra-urban migration in North American cities. It has been found that the probability of a change of residence of a household is very high in the third and fourth stages of their life-cycle. It is also found that the majority of the movers posseses certain common characteristics which are related to the stages of their life-cycle. They have some common reasons to move and are biased towards the outer areas of the city.

With reference to their presence in different residential areas, the East Indians in Edmonton are similar to other city dwellers. Therefore, it is hypothesized that the characteristics of the East Indians who have changed their residence in Edmonton, the reasons and directions of their moves, would be similar to the other city dwellers who have moved within the city

3.6 RESEARCH EXPECTATIONS

On the basis of the theoretical and empirical work outlined, the following hypotheses represent the expected outcome of this study.

1. As the mobility rate is high in the child-bearing stage, it is expected that the age of the majority of the heads of the households of East Indian movers will be less than 45 years.

2. As households become larger (e.g. birth of a child) mobility rates increase in response to the increased demand of more space.

3. Renters are more mobile than owners because aspirations to become a house owner encourages mobility.

4. As one's economic status gets better residential mobility is likely to increase.

5. With the change of life-cycle, the household prefers to change the neighborhood in response to the changed demand for general accessibility including access to work, school, shopping and recreation.

6. With the change of life-cycle the household prefers to move to a neighborhood of higher socio-economic status with better accessibility characteristics.

7. A household prefers to move to a newly developed residential area of a developing metropolitan area because of a wider range of housing opportunities in those areas.

8. Distance of the move increases as the origin of the move changes from inner to outer parts of the city.

9. As family size increases the household moves towards the periphery of the city, particularly to the newly developed suburbs.

4. METHODS AND DATA

The main objective of this chapter is to elaborate on the sources of data and methodological procedures used in this study. Included are descriptions of the study area, the survey method employed, the variables used and the method of analysis. The major limitations encountered during this research will also be discussed.

4.1 STUDY AREA AND RESOURCES

The area of study is the city of Edmonton as well as the city of St. Albert and the municipality of Sherwood Park in the county of Strathcona. This area is referred to in this study as "Edmonton". It does not include the metropolitan areas as defined by the Canada census. This area has been selected because firstly, the pilot survey indicated that almost all the East Indians of the Edmonton metropolitan area live in the city of Edmonton and some of them live in St. Albert and in Sherwood Park. Secondly, as St. Albert and Sherwood Park are very close to the city of Edmonton, the possibility of changes of residence of the households between these urban centres is very high. Finally it was convenient to collect data from these urban centres within the limited time and financial resources available.

4.2 SURVEY METHODS USED

The data for the research have been collected through primary sources. In the collection of primary data a self-administered questionnaire survey was used. The self-administered questionnaire method was chosen firstly, in order to obtain a high response rate which would not be possible by mailing questionnaires. Secondly, to overcome the unwillingness of the respondents to answer some particular questions it was felt interviews would be more successful. Thirdly, to make sure that the person specified completes the questionnaire, it was necessary to be there and fourthly, so as to conduct the survey in person and thus be in a position to clarify any items that might cause confusion. Finally to be able to gain more information about the respondents through direct observation it was necessary to be on the premises (Moser and Katlan, 1971; and Babbie, 1975). Both open ended and closed questions were used in the questionnaire schedule. The main advantage of the open ended questions is to derive non-directed responses from the interviewers. Closed questions on the other hand, are easier and quicker to answer and furnish standardized data more amenable to quantification. A copy of the questionnaire appears in Appendix A.

4.3 VARIABLES

A total of 65 variables were included in the questionnaire schedule. These variables can be classified into four groups. The first group includes the addresses of origins and destinations of the last move made by the respondents. The second group comprises the factors which caused the last move and the third group contains the reasons for the choice of present residence. The fourth group includes the demographic and socio-economic characteristics of the household. All these variables were included in order to investigate the association between the life-cycle and change of residence of East Indians in Edmonton.

In order to collect information on the moves, the first group of variables included the addresses of the present and last residences of the respondents. In addition, the information on dwelling type, year of arrival, length of stay in the present and previous residences and how many times a household has changed its residence in Edmonton were also recorded. These variables were included because, they will provide the information on the direction of the flow, the preference for different types of dwelling unit, mobility rates of an East Indian household in Edmonton and the average length of stay the family has made in a dwelling unit.

To determine why the household moved, both open ended and closed questions were used. The closed questions

attempted to elicit the following information: shortage of dwelling space for the household, change in income, too costly to maintain or pay rent, wanted to change the neighborhood, no community member in the neighborhood, demand for better accessibility and desire to buy a home. The open ended questions asked for information concerning the dwelling space in order to identify whether or not it was related to a change of life-cycle.

To find out why the present residence was selected the closed questions attempted to derive the following information: enough space for the household, closer to work, closer to children's school, good neighborhood, better accessibility characteristics of the neighborhood, new home, resale potential, within economic capacity and closer to friends. These variables were included because they are closely related to a change of life-cycle (see chapter 3). Moreover, they are the most frequently cited reasons in chosing the residence by North American city dwellers.

As demographic and socio-economic characteristics of a household defines its stages in its life-cycle, the fourth group of variables was included in order to identify the stage in the life-cycle of the household which moved. To determine the demographic and socio-economic characteristics of the household which moved, the following information was collected: size of the household, age, sex, marital status, occupation, year of arrival in Canada of each of the family members. In addition, information on the tenure status

before and after the move, year of the move, year of getting married, years when the first and the last child born were also collected.

4.4 THE SAMPLE

The sample for the present study was chosen from a universe of 676 individuals. Among it, 456 were the members of the 17 different Indian ethnic associations, 144 were the members of three Pakistani associations and 26 were the members of the Bangladeshi association. Since there were no Srilankan associations in Edmonton in 1982, addresses of 50 Srilankan households were collected from the personal telephone notebook of some people who are from Srilanka and have social contacts with other Srilankan households in Edmonton. In addition, some addresses were collected from the telephone directory of the City of Edmonton, 1982, by following some common Srilankan last names (e.g. Silva, Fernando, Perera and Hewapathrine). Finally, all the collected addresses were shown to the respective community leaders and asked whether they knew any additional community members in Edmonton. It is assumed that the East Indians have a strong social network. Therefore, it was anticipated that almost all of the East Indians in Edmonton have been considered for this research.

Only those East Indians who had changed their residence in Edmonton since their arrival in the city were considered. This was done on the assumption that most of the city

dwellers change their residence whenever they experience changes in their household structure. Again it is assumed that the majority of the East Indians in Edmonton also had changed their residence in order to satisfy their changed housing needs. Only the direction and causal factors for the last move of the East Indian households were considered for this study irrespective of the time of move.

The samples were drawn randomly from each of the above mentioned lists of Indian, Pakistani, Srilankan and Bangladeshi households in Edmonton in order to fairly represent each of these communties in the study area. However, the samples do not represent the same proportion of households from each of the communities. The sample and percentages are shown in Table 4.1 for each community separately.

Out of 676 households, 276 were selected for the study, i.e. 40.7 per cent of the total East Indian population. Among the selected households 168, 70, 24 and 13 were from Indian, Pakistani, Srilankan and Bangladeshi communities respectively and represented, 36.8, 46.6, 48.0 and 50.0 per cent of each of the total community population (Table 4.1). Personal contact was made with all of these households in order to get their consent to be interviewed. Two hundred and thirty (83.6 per cent) responded positively. The head of these 230 households (135 Indian, 62 Pakistani, 20 Srilankan and 13 Bangladeshi), were approached. One hundred and fifty two were found to have changed their residence (66.1 per

TABLE 4.1

SAMPLE SIZE OF EAST INDIANS IN EDMONTON

	1	2		3		4		
Country	Total household in Edmonton	Selected household for the study		Household agreed to interview		Household moved		
		Total	%of 1	Total	%of 1	Total	%of 1	%of 3
India	465	168	36.8	135	29.6	83	18.2	61.5
Pakistan	144	70	46.6	62	43.1	46	31.9	74.2
Srilanka	50	24	48.0	20	40.0	13	26.0	65.0
Bangladesh	26	13	50.0	13	50.0	10	38.5	76.9
Total	676	276	40.7	230	34.0	152	22.3	66.1

Source: Association Membership Lists

University of Alberta

cent). As a result, the total sample size for the study was 152 households which represents more than 22 per cent of the East Indian population in Edmonton. The total sample for the study comprised of 83 Indians, 46 Pakistani, 13 Srilankan and 10 Bangladeshi households in Edmonton. These households represented 18.5, 31.9, 26.0 and 38.5 per cent of the Indian, Pakistani, Srilankan and Bangladeshi communities respectively (Table 4.1).

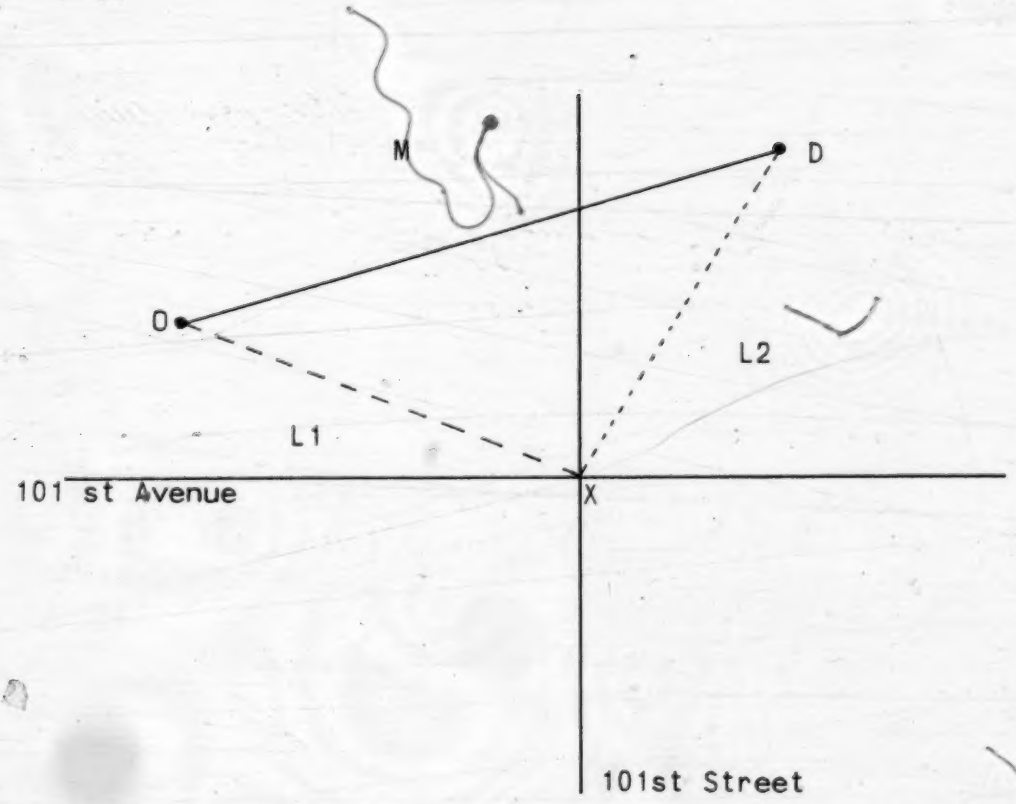
4.5 METHOD OF ANALYSIS

Initially the addresses of the origins and destinations of the moves will be plotted on a street map of Edmonton. The linear distance of each move between the origin and destination of the move will be considered as the distance of the move.

The direction of each move will be measured by comparing the change of linear distance from the intersection of 101st Street and 101st Avenue. This intersection has been considered as a focal point for this analysis by following McCracken (1973) and Lukomskyj's (1974) models. Moreover, in terms of street and avenue numbers of the city of Edmonton, this intersection is approximately at the centre of the city. The method which will be used to measure the direction of the move is illustrated in Figure 4.1. The figure illustrates that when the move originated at O and ended at D, the linear distance between O and D, i.e. M, is the distance of the move. Linear

FIGURE 4.1

MEASURES OF MOVES



O = Origin Node
D = Destination Node
X = Intersection of 101st st. and 101st ave.
M = Distance of Move
L1 = Linear Distance Between O and X
L2 = Linear Distance Between D and X

University of Alberta

distance between O (the intersection of 101st Street and 101st Avenue) is L1 and the distance between D and X is L2. Therefore, the direction of the move will be calculated by comparing these two linear distances, that is by calculating L1-L2. A positive result will be considered as a move towards the city centre and a negative result will be considered as a move away from the city centre.

This method has been selected for two reasons. As noted in chapter two, previous studies suggest that distance and directional biasness are the basic characteristics of the pattern of intra-urban migration (McCracken, 1973; Simmons and Baker, 1974; and Weinberg, 1979). Other studies, similar to this one, have used these measurements so they are employed here to facilitate comparison of results.

Next, frequency and percentage distributions of all the variables from the open-ended questions will be calculated, graphed and presented in tables. This will provide the information on the demographic and socio-economic characteristics of the households which have changed their residence in the city.

To determine the perceived importance of the hypothesized variables for causing the respondents to move and for the selection of their destinations, they were asked to rank the most important five. The respondents were instructed to place a number 1-5 according to the importance of the variables in pushing them from their place of origin and pulling them to their place of destination. That is, one

for the most important one through to five for the least important one. The total number of responses to each of these variables will be calculated and presented in tables to provide the absolute importance of each of these factors in causing the move and in selecting the destinations.

The five factors were combined to give a composite measure of their importance to a household's move and selection of a destination. The five variables, each household ranked as important were weighted in reverse order. That is, a five was assigned the most important one (which was ranked by a 1), four for the second most important through to one for the least important (which was ranked by a 5). All these weighted values were added to give a composite score. The percentage of the total weighted value for each variable will represent its relative importance for causing moves and selecting the destinations in the city. Finally these variables will be classified into six manageable categories for the analysis. This will be done to reduce the original larger set of variables to a manageable number and match these variables with a set of research expectations (stated in chapter 3). This analysis will provide the information on why the households had changed their residence.

Next, the relationship between the move and life-cycle of the sample households will be ascertained by analyzing some selected demographic variables as they relate to each intra-city shift. These variables are: ages of the eldest

and the youngest child in the family; length of household formation; time the family was reunited in Edmonton[3]

Finally, all this analysis of who moves, why do they move, where do they move and whether or not the move is related to the movers' stages of the life-cycle will be brought together in a summary of the principal findings. Thereafter, a conclusion will be drawn with respect to the movement pattern and whether or not the East Indians differ from others in the city. Finally some suggestions will be made for future research in the field of intra-urban migration for a minority community in a Canadian city.

4.6 LIMITATIONS OF THE STUDY

The major limitations of the study are as follows. Although the executive members of different East Indian ethnic associations have claimed that 90 per cent of their community members in the city are the members of their associations, it is difficult to find proof of it. It is anticipated that in Edmonton, there might be some more East Indians who were not included in the initial sample and therefore are not included in the study.

Questions were not asked regarding the place of birth of every member of the associations. This means that certain

---

[3] As noted in chapter 2, the head of the East Indian households often arrive first in a Canadian city unaccompanied by their families and after a certain period, the family join them from their home country. Therefore in this study, the reunion of a family is considered as one sort of formation (a reformation) of the household in Edmonton.

individuals are included who were not born in one of the four countries referred to in chapter 2. Without any alternative sources of data, the study must depend on the membership lists and the observations of the researcher.

Informal interviews may have produced more complete answers to some of the questions set in the questionnaire schedule. Constraints on time and financial resources precluded more in-depth interviewing. Furthermore, an in-depth collection of information was not possible because of the non-cooperative attitude of some of the respondents, specifically during the pilot questionnaire survey. Some of this was overcome by eliminating some of the questions, particularly those on income, the educational level of the respondents, information on the earlier moves and birth of all the children of the family. This means, this study will only examine the basic elements of the East Indian intra-urban migration and only their last move in city.

5. SPATIAL DIMENSIONS OF INTRA-URBAN MIGRATION FLOW

The examination of the spatial dimensions of the intra-urban migration pattern is an important issue for a better comprehension of how they relate to a mover's stages of the life-cycle. This chapter provides an empirical analysis of the spatial dimensions of intra-urban residential migration patterns of the East Indian households in Edmonton. The first section of this chapter primarily includes a descriptive analysis of the areal variation of the pattern of households before and after the move. The second and third sections contain the analysis on direction and distance of the move respectively. The fourth section includes the analysis of the time of move, that is the year when the households changed their residence in Edmonton. Finally, a conclusion is drawn from these empirical results.

5.1 AREAL VARIATION OF THE EAST INDIAN HOUSEHOLDS BEFORE AND AFTER THE MOVE

The sample consists of 152 East Indian households in Edmonton of which 44.1 per cent had changed their residence once and 26.3 per cent, 15.1 per cent and 14.5 per cent did the same twice, three times and more than three times respectively, since their arrival in the city. On the average, the sample households had changed their residence twice in the city. However, only the information pertaining to their last move was collected for the purpose of this

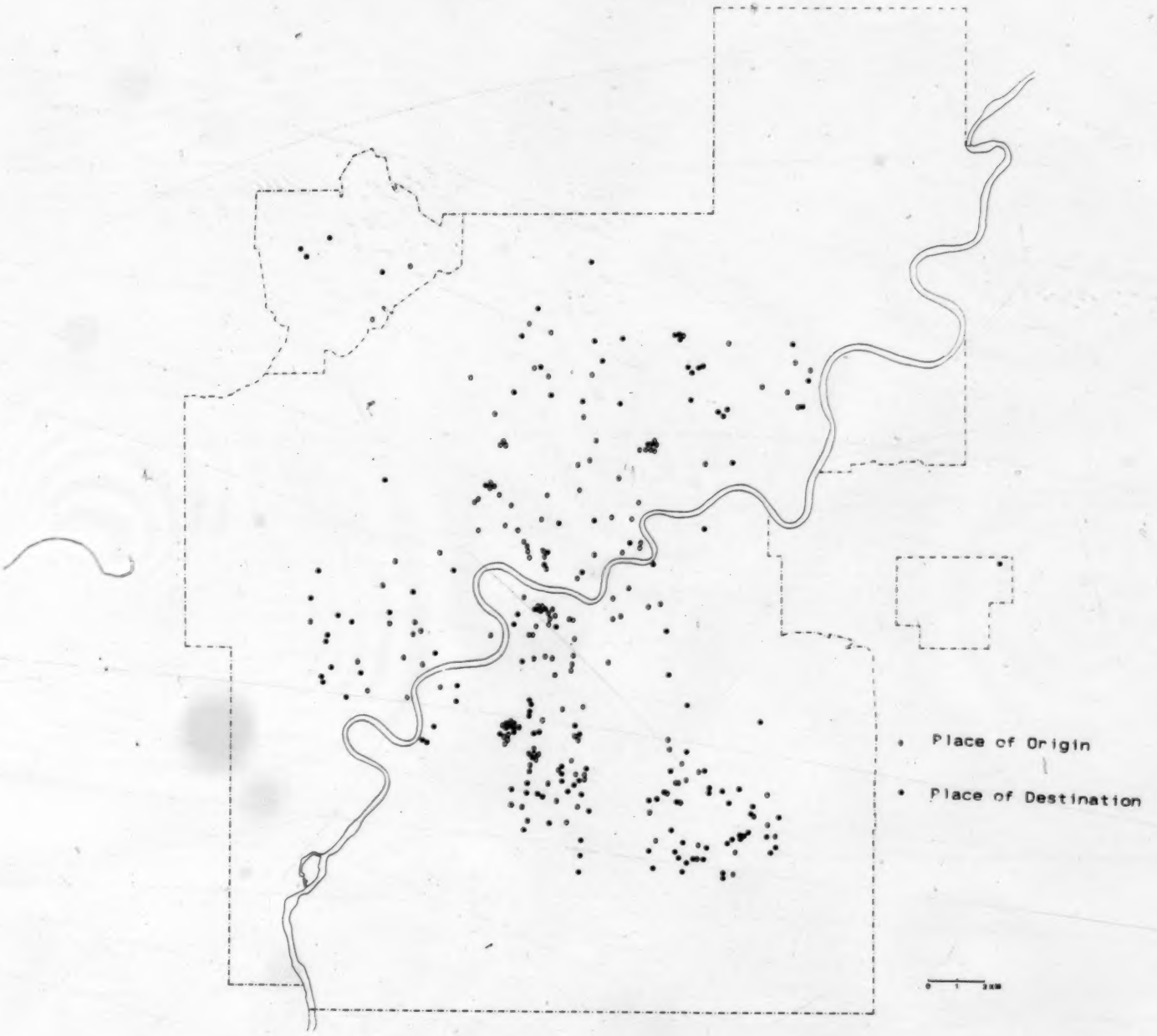
study, irrespective of how many moves they had made and when they moved.

The areal variation of the East Indian households before and after their last move in Edmonton is shown in Figure 5.1. This figure depicts two distinct patterns of distribution. Firstly, there is the presence of a significant number of households around the centre of the city before the move. Secondly, after the move very few households are found around the centre of the city but most of them are in the peripherial suburbs. The concentrations occur mainly in some selected residential areas (e.g. Millwoods, Duggan, Greenfield, West Jasper Place, MalmoPlain, Thorncliff, Primrose and Londonderry). The zone in between the centre and the periphery of the city accommodates a much higher number of the households before the move than it does after the move. The variation of the pattern of the moves between the two periods is generally away from the centre of the city.

In order to perceive the overall movement pattern, a street map of the City of Edmonton was devided into 56 grid squares of equal size. Each of the squares was assigned a character according to the movement associated with it. Thus a square in which more shifts had originated than terminated is ascribed a negative character. The difference between the number of outward and inward moves (O-D) was calculated and this figure indicates the net loss for that square. Conversely, where more moves terminated than originated,

FIGURE 5.1

AREAL VARIATION OF THE EAST INDIAN HOUSEHOLDS BEFORE AND AFTER THEIR LAST MOVE IN EDMONTON



Source: Questionnaire Survey.

that is when the total number of D is higher than the total number O, the square is ascribed a positive character. The differential indicates the net gain for that square.

The overall shifting pattern in terms of the size of the differential, i.e. net loss and net gain, is shown in Figure 5.2. The squares with large numbers of shifts have high differentials. The squares with zero differentials, where incoming and outgoing moves are equal in number are termed "areas of equilibrium". Those with some differential, that is one and more than one, are termed "areas of disequilibrium".

The areal distribution of the squares with various differentials demonstrates the following features:

1. The central city is an area of marked outward movement. The squares with greatest loss occur at the centre of the city.

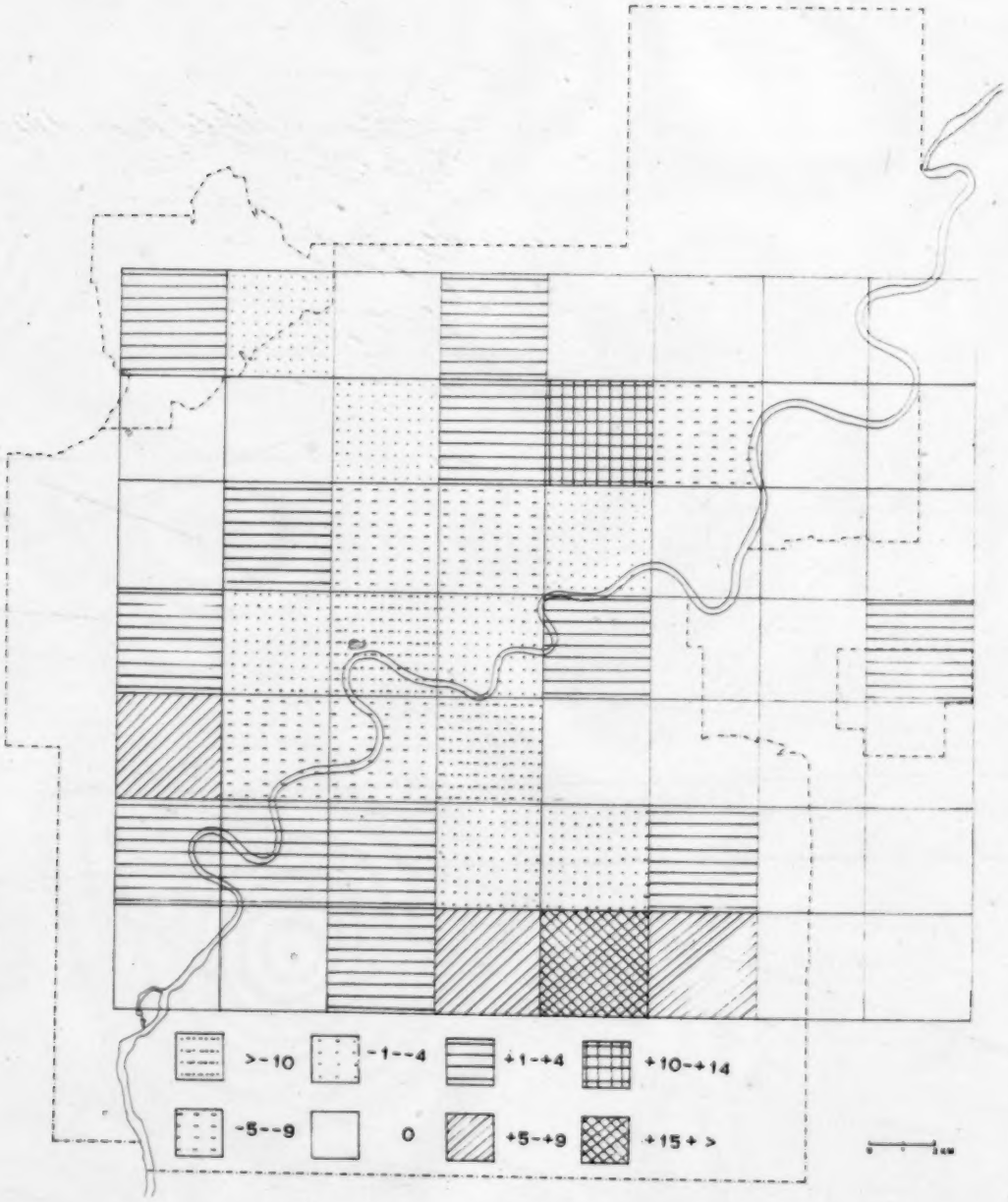
2. The middle zone, that is in between the centre and the periphery of the city, is an area with a composite type of movement. The squares in this zone of the city are with all types, positive, negative and zero differentials. The squares with negative differentials are higher in number. Although the outgoing are higher in number than the incoming households, it has not created any sharp change in this zone compared with the central and the peripherial areas of the city.

3. The majority of the residential areas at the periphery of the city show a net gain. However, some

FIGURE 5.2

NET CHANGE BY INTRA-URBAN MOVE

Values indicate net gain or loss within squares by inwards and outwards move



Source: Questionnaire Survey.

residential areas at the periphery are areas of equilibrium having no gain and losses by intra-urban movement of the East Indian households. Examples are, Beverly, Rundle-Heights, Bonaventure, Idylwylds and Warwick.

4. In terms of net gain, the areas of greatest disequilibrium are in the periphery of the city. Net gain is highest in Millwoods. This is a newly developed residential area at the periphery of the city where housing was comparatively cheaper than other suburban residential areas (Larson, 1979; Lebourgeois, 1981; and Royal Trust, 1983).

5.2 DIRECTION OF THE MOVE

The areal variation of the East Indians before and after the move depicts that the movement pattern of this community is generally outward in direction, that is, towards the periphery of the city. In order to investigate the absolute direction of the flow, the linear distance of the origin and destination locations of each move from the intersection of 101st Street and 101st Avenue (city centre) is calculated. Next each of the moves is ascribed a character that is either towards or away from the city centre according to the direction of the flow (see chapter 4, Figure 4.1). Thus a move for which the distance between the origin and the city centre (L1) is greater than that of the distance between the destination and the city centre (L2), that is L1-L2, is positive is ascribed as a move towards the city centre. Conversely, where L2-L1 is

negative, a move towards the periphery is indicated, in other words, away from the city centre. Finally, the two sets of directions are classified by 1 kilometre groups by distance of the origin from the city centre to give the data presented in Table 5.1.

Table 5.1 indicates that more than three quarters (76%) of the total East Indian households moved away from the city centre. This figure is much higher than that, mentioned by McCracken (1973: 75) for all intra-urban moves in Edmonton, which was 50.7 per cent. It was 62.2 per cent for the child-bearing households in Edmonton (Lukomskyj, 1974: 84).

Using the percentage of moves shifting towards and away from the city centre as a measure of directional bias, it is strikingly evident that inner city movers display the most biased pattern. That is, they are more likely to move away from the city centre. Middle zone households appear to display slightly more bias towards the periphery of the city than those households which are in the outer suburban residential areas of the city.

McCracken's study on intra-urban migration in Edmonton showed that among all the moves originating within one mile (1.6 Km) of the city centre, 81 per cent was in an outward direction (McCracken, 1973: 75). But Table 5.1 shows that 94 per cent of the East Indians who were within 2 kilometres of the city centre had moved towards the periphery of the city. This suggests that in Edmonton, a higher percentage of the East Indians who resided near the city centre was eager to

TABLE 5.1

CONCENTRIC VARIATION OF DIRECTION OF THE MOVE

Distance of origin from the city centre (1)Kms	Total number of moves (N1)	Moves, towards the city centre (L1-L2=negative)		Moves, outwards from the city centre (L1-L2=positive)	
		No. of moves (N2)	% of moves originating from each class(% N1)	No. of moves (N3)	% of moves originating from each class(% N1)
0 - 0.99	1	0	0.0	1	100.0
1 - 1.99	9	1	11.1	8	88.0
2 - 2.99	25	1	4.0	24	96.0
3 - 3.99	11	1	9.1	10	90.9
4 - 4.99	21	2	9.5	19	90.5
5 - 5.99	4	1	25.0	3	75.0
6 - 6.99	14	5	35.7	9	64.0
7 - 7.99	25	4	16.0	21	84.0
8 - 8.99	18	5	27.8	13	72.2
9 - 9.99	9	5	55.6	4	44.4
10 - 10.99	4	4	100.0	0	0.0
11 - 11.99	4	3	75.0	1	25.0
12 and above	5	4	80.0	1	20.0
Total	150	36	24.0	114	76.0

Source: Questionnaire Survey

University of Alberta

move away from it.

In order to perceive the over all direction of the move, the street map of Edmonton was divided into 56 grid squares of equal size by dividing north to south into 7 and east to west into 8 equal sections (Figure 5.2). Then each of the 56 sections was named as 1,2,3,4,5,6,7 and A,B,C,D,E,F,G and H from north to south and west to east respectively. The number of moves originating and terminating in each of the grid squares was calculated and is presented in Figure 5.3. The flow matrix (Figure 5.3) of the East Indians in Edmonton shows that the direction of the majority of the moves is away from the city centre. This is specifically true for those moves which had originated at the city centre.

Although the overall movement is away from the city centre, most moves terminated in nearby areas. It is noticeable that almost all the moves originating in the north middle zone (C4, C5, C6) and northern suburbs of the city, terminated within the same zone but towards the periphery of the city. Conversely, nearly 50 per cent of the moves originating in the southern middle zone of the city terminated within the same zone and except for a few moves, the majority of the rest moved towards the southern periphery of the city. The southern periphery (including Millwoods, Duggan, Greenfield) is the only zone of the city where a significant number of moves terminated . However, most of the moves which terminated in the southern periphery

FIGURE 5.3
FLOW MATRIX, EAST INDIANS IN EDMONTON

Origin		A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	C5	C6	C7	D1	D2	D3	D4	D5	D6	D7	E1	E2	E3	E4	E5	E6	E7	F1	F2	F3	F4	F5	F6	F7	G1	G2	G3	G4	G5	G6	G7	H1	H2	H3	H4	H5	H6	H7	Total ->	
	A1																																																									2	Destination
	A2																																																										0	of the
	A3																																																										0	move
O	A4																																																										0	
r	A5																																																										1	
i	A6																																																										0	
g	A7																																																										0	
i	B1																					1																																				1	
n	B2																																																										0	
	B3																																																										0	
o	B4	1					1						1																																														4	
f	B5		1	3				1	1																																																		6	
	B6			1																																																								1	
m	B7																																																											0	
o	C1																																																										0	
v	C2	1														1	1		1		1			1																																					6	
e	C3			2														1		2	1		1	1			1																																	9	
	C4								1		1	1		2	2							1			1																																			11	
	C5													3	5					1	2	1				1	2																																	15	
	C6			2		1						1		4	1			1			1	3				2																																	17	
	C7							1														1	1																																			4	
	D1																																																										0	
	D2																							1	1				1																														3	
	D3																								1		1		2			5																										9	
	D4																															1																											2	
	D5												1						3	3		1		1																																			10	
	D6																		1		1	1				1																																	7	
	D7												1							1																																							3	
	E1																																																										1	
	E2																														1				1																									5	
	E3																						1										1	3			1	1																					8	
	E4				1																															1																								4	
	E5																																																											2	
	E6																																																											7	
	E7																																																											6	
	F1																																																											0	
	F2	1					1																																																				5	
	F3																																																											0	
	F4																																																											0	
	F5																																																											0	
	F6																																																											0	
	F7																					1																																							3	
	G1																																																											0	
	G2																																																											0	
	G3																																																											0	
	G4																																																											0	
	G5																																																											0	
	G6																																																											0	
	G7																																																											0	
	H1																																																											0	
	H2																																																											0	
	H3																																																											0	
	H4																																																											0	
	H5																																																											0	
	H6																																																											0	
	H7																																																											0	
Total		3	0	0	1	9	1	0	2	1	1	1	1	4	0	1	2	1	4	9	17	4	1	6	1	4	2	6	9	1	9	5	3	2	7	17	0	4	0	0	0	2	10	0	0	0	0	0	0	0	0	0	0	1	0	0	152	

Source: Questionnaire Survey.

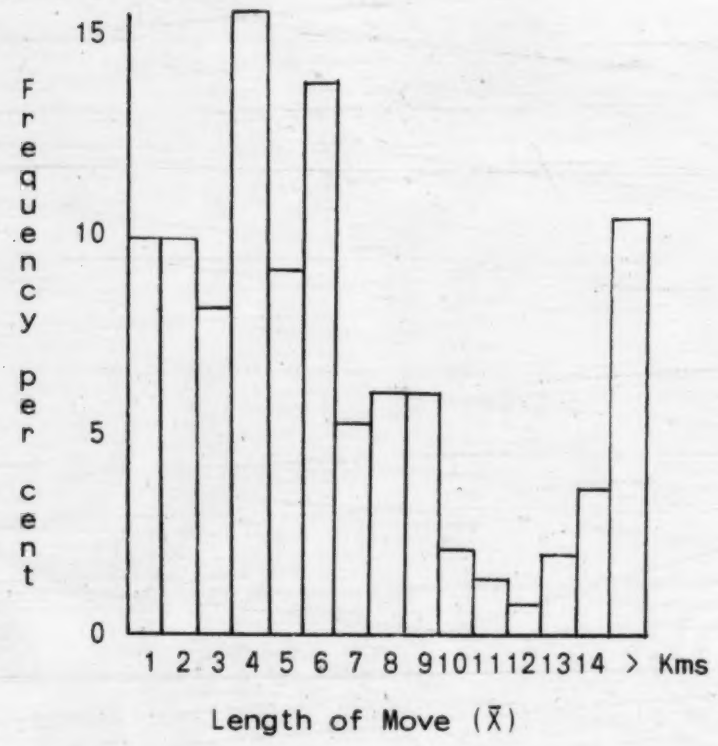
of the city had originated from the same zone. This suggests that the East Indians tended to relocate nearby, within the same zone but away from the city centre. It also suggests that, they prefer to move to those neighborhoods which are known to them. This aspect will be examined more fully when the data from the questionnaire are analyzed.

5.3 DISTANCE OF THE MOVE

As was mentioned in chapter 3, the literature on intra-urban migration indicates that the majority of the intra-urban moves are short in distance. The flow matrix also shows that the significant proportion of the East Indians relocated within the same zone. Figure 5.4 describes the distance frequency distribution of residential moves of the East Indians in Edmonton. This has been calculated by measuring the linear distance of each of the moves and grouping them into 1 kilometre distance classes. The percentage distribution shows that moves of less than 2 kilometres in length accounted for 19 per cent of the total. Ten per cent of the total moves are more than 14 kilometres long. However, the average length of move is 5.8 kilomrtres. Moves of less than 6 kilometres in length accounted for 63 per cent of the total. This information suggests that very small and very long moves are fewer in number and that the East Indians are more likely to make moderate distance moves of a relatively short distance.

FIGURE 5.4

RESIDENTIAL MOVEMENTS OF EAST INDIAN HOUSEHOLDS IN EDMONTON BY DISTANCE



Source: Questionnaire Survey

University of Alberta

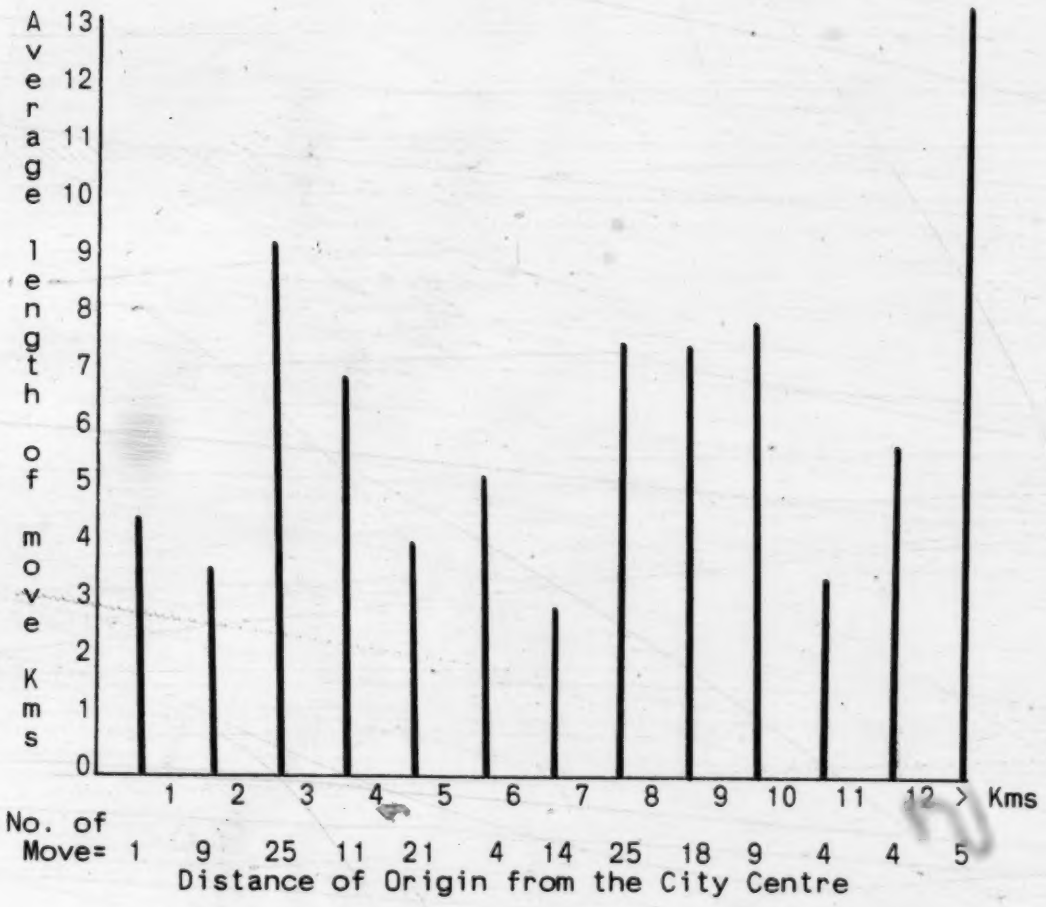
It was hypothesized in chapter 3 that, the distance of a move increases as the origin of the move changes from the inner to the outer parts of the city. This is because, on the one hand, the housing density decreases from inner to outer suburbs as most of the dwelling units in the inner city are apartments while in the outer suburbs single detached housing predominates (refer to chapter 1, see page 5). On the other hand, as the life-cycle changes the households gradually move from apartment buildings in the inner city, towards the periphery of the city (refer to chapter 3). To determine the distance of move with respect to place of origin, 12 distance classes from the city centre were identified by drawing circles on the map centred on the city centre and with radii of 1,2,3 to 12 kilometres. Then the average length of moves which had originated from each of the "one" kilometres distance classes was calculated. The average length of move originating from each class thus obtained is shown in Figure 5.5.

This figure does not show any increase in length of move with an increase in distance from the city centre. However, on average, the longest move is from the periphery of the city and the shortest average move is from the middle zone (6.7 Kms from the city centre) of the city.

Figure 5.4 shows that, except for two (2-3 kms and 3-4 kms), most of the classes which are within 7 kilometres of the city centre have shorter distance moves than those beyond 7 kilometres from the city centre. It should be

FIGURE 5.5

DISTANCE OF ORIGIN FROM THE CITY CENTRE AND AVERAGE LENGTH OF MOVE



Source: Questionnaire Survey

University of Alberta

mentioned here that these two classes accounted for 46 per cent of the moves originating from within 7 kilometres of the city centre. Of the average distance of the moves originating beyond 7 kilometres from the city centre, except for two classes (10-11 and 11-12), all were comparatively longer than those which had originated from inner part of the city.

The distance frequency distribution indicates the average length of moves originating in the outer zone of the city is comparatively longer than those originating in the inner zone of the city. This shows that, although the East Indians who resided in the inner part of the city move away from the city centre, they are more likely than those residing elsewhere to move within or to nearby neighborhoods. In contrast those who reside on the periphery of the city move in both inward and outward directions and are likely to change not only the neighborhood, but also the area.

5.4 TIME OF MOVE

A knowledge of the time of move is important to better understand the total movement pattern. The data on the length of stay of the households in their present residence provided information on the time of move. Length of stay in the present residence is less than 2 years for 46 per cent of the households (Table 5.2). Although 26.3 per cent of the respondents have lived in their present residence for less

TABLE 5.2

FREQUENCY DISTRIBUTION OF THE EAST INDIAN HOUSEHOLDS IN EDMONTON BY LENGTH OF STAY IN THE PRESENT RESIDENCE

Length of stay (months)	Number of households	Percentage of total
Less than 12	40	26.3
12 - 23	30	19.7
24 - 35	26	17.1
36 - 47	16	10.5
48 - 59	10	6.6
60 - 83	12	7.9
84 - 119	7	4.6
120 and above	11	7.2
Total	152	99.9

Source: Questionnaire Survey

University of Alberta

than one year, 3.23 years is the mean length of stay in the present residence for all the households. This suggests that the East Indians have been very mobile in Edmonton and they are more likely to change their residence about every three years. More than 63 per cent of the households changed their residence within the last 3 years. As referred to in chapter 2, this time period corresponds to the time period when certain residential areas started to develop at the periphery of the city. Therefore, it can be tentatively said that housing opportunities have a strong impact on the movement pattern of the East Indian households in Edmonton. This will be considered when the data from interview schedules are analyzed.

5.5 SUMMARY

Throughout this chapter, it was noted that the most visible migration flow is outwards from the city centre. From this flow it is possible to show that the initial settlement of most of the East Indians was in the inner part of the city. That is, at the time of their arrival the majority of the East Indians settled in the inner part of city and after some time they moved towards the outer part of the city. The flow is predominantly towards those suburbs which are newly developed residential areas and where housing is comparatively cheaper than other suburban residential areas.

Only 24 per cent of the households moved towars the city centre. Most are from the outer zone of the city. A very high percentage of the East Indians moved towards the periphery of the city. This is much higher than the moves associated with the total population of Edmonton as shown by McCracken. However, most of the moves terminated in nearby residential areas.

A low percentage of the total households shifted a very short and very long distance. The majority of them moved a moderate distance (3-6 Kms) from their former residence to nearby neighborhoods. The moves originating from the inner part of the city are comparatively shorter in distance than those from the outer part of the city.

The East Indian households in Edmonton change their residence frequently. More than one-quarter of the respondents moved within the last year and more than 63 per cent of them moved within the last 3 years from the time the survey was conducted. The time of their move shows that the majority of them moved after the development of certain residential areas at the peripherial suburbs of the city. In other words, housing opportunities have a major impact on the migration pattern of the East Indians in Edmonton.

The question now is why the East Indians in Edmonton have this type of movement pattern. Does it relate to their stages of the life-cycle or to available housing opportunities within the City of Edmonton or to other factors? However, by following Lukomsyj's work on all

child-bearing households in Edmonton, it can be tentatively suggested that the East Indians are in the early stages of their life-cycle. This aspect will be examined fully in chapters 6 and 7 when data from the questionnaire survey are analyzed.

6. DEMOGRAPHIC AND SOCIO-ECONOMIC CHARACTERISTICS OF THE EAST INDIAN MOVERS IN EDMONTON

Similar to the areal variation in migration flows, as discussed in chapter 5, the moves that occur in metropolitan areas are not evenly distributed across the population. Most of the moves that occur in metropolitan areas are concentrated among certain segments of the population. It has been documented that the variables closely related to the family life-cycle are the major social and demographic characteristics distinguishing mobile from stable households. It therefore is necessary to examine the demographic and socio-economic characteristics which are closely related to the family life-cycle of the East Indian movers in Edmonton for a better understanding of their mobility pattern.

A descriptive analysis of the demographic and socio-economic characteristics of the East Indian households which changed their residence in Edmonton is the content of this chapter.

6.1 DEMOGRAPHIC CHARACTERISTICS

The principal variables which are used to identify various stages of the life-cycle are the demographic characteristics of a household. This section of the chapter contains an analysis of some selected demographic characteristics of the East Indian movers in Edmonton. These

variables are: age, sex, marital status and household size.

6.1.1 Age

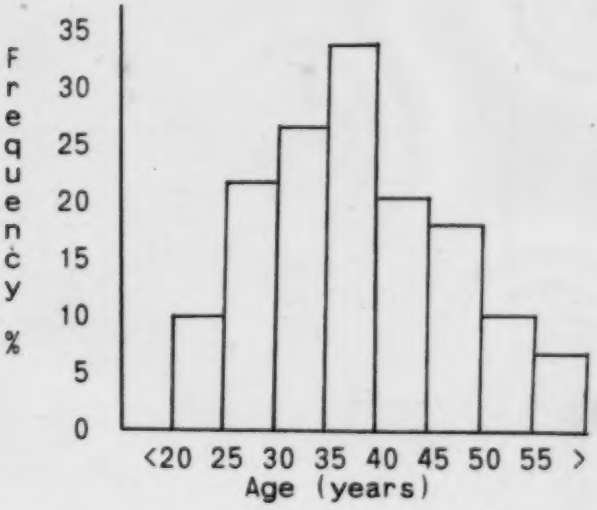
The variable age has been shown to be very important in intra-urban migration bacause, ages of the movers of a household are one of the important indicators of various stages of the life-cycle.

The age distribution pattern of the East Indian movers in Edmonton shows a pattern similar to the other movers in North American cities. Figure 6.1 depicts that the age of 66.5 per cent of the heads of the sample households is not more than 40 years. Among all, only 6 per cent is more than 50 years old and none of them is less than 21 years. Sixty-two per cent of the household heads are within the age group of 26-40 years. The mean age of the head of the households is about 38 years. This age distribution is similar to that of other East Indians in different Canadian cities (Siddique, 1977; Husaini, 1981; and Yasmin, 1982). It can be said that, like other movers in North American cities East Indians are predominantly young.

Mean age of the wife of the sample households is 34 years. Among the households, 83 per cent is not more than 40 years (Figure 6.2). About 74 per cent is within the age group of 26-40 years. The equivalent percentage for the movers in Toronto is much less than this (Simmons and Baker, 1974).

FIGURE 6.1

AGE DISTRIBUTION OF THE HEAD OF THE HOUSEHOLD

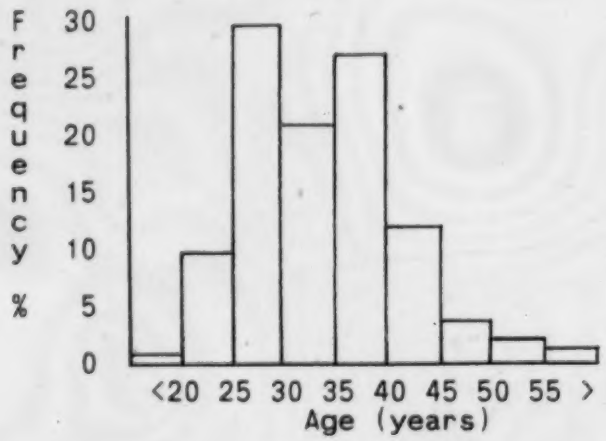


Source: Questionnaire Survey.

University of Alberta

FIGURE 6.2

AGE DISTRIBUTION OF WIFE OF THE HOUSEHOLD



Source: Questionnaire Survey.

University of Alberta

Table 6.1 and 6.2 depict the ages of the eldest and youngest child in the family. One quarter (25%) of the households have children 15 years of age and over. Conversely, more than half (55.8%) of the households have children of less than 6 years of age. Table 6.1 shows that the children of 56 per cent of the households is under the age of 10 years. More than three quarters of the total households had at least one child less than 10 years old. This shows that the majority of the East Indians who had changed their residence in Edmonton are composed of youthful adults and young children.

Glick (1957) and Foote et al (1960) have stated that most households in the child bearing stage are composed of adults in the late twenties or older and children up to the age of ten years. Lansing and Kish (1957) identify two stages of the life-cycle. The households with a child under 6 years is in the "child-bearing" stage and that with all children over 6 years in the "child-rearing" stage (refer to chapter 3). Therefore, it can be stated that according to the age distribution pattern of the members of the East Indian households which changed their residence in Edmonton, a significant proportion of them are either in the child-bearing or child-rearing stage of their life-cycle.

6.1.2 Sex

The sample consists of 152 households of which the head of 99 per cent is male. This figure confirms the earlier

TABLE 6.1

AGE DISTRIBUTION OF THE ELDEST CHILD IN THE FAMILY

Age (Years)	Number	Percentage(%of N)
Less than 1	1	0.9
1 - 2.9	6	5.2
3 - 4.9	16	13.8
5 - 6.9	21	18.1
7 - 8.9	10	8.6
9 - 10.9	11	9.5
11 - 12.9	10	8.6
13 - 14.9	12	10.3
15 and above	29	25.0
Total (N)	116	100.0

Source : Questionnaire Survey.

University of Alberta

TABLE 6.2

AGE DISTRIIBUTION OF THE YOUNGEST CHILD IN THE FAMILY

Age (Years)	Number	Percentage(%of N)
Less than 1	5	5.8
1 - 2.9	11	12.8
3 - 4.9	11	12.8
5 - 6.9	21	24.4
7 - 8.9	5	5.8
9 - 10.9	13	15.1
11 - 12.9	5	5.8
13 - 14.9	7	8.2
15 and above	8	9.3
Total (N)	86	100.0

Source: Questionnaire Survey.

University of Alberta

statement (chapter 2) of male dominant characteristics of the East Indian community in Canada. However, this higher percentage of male movers does not correspond to the general trend in North American cities. Literature on intra-urban migration in North American cities shows that the households headed by females are more mobile than those headed by males (Weinberg and Quigley, 1977: 52).

6.1.3 Marital Status

More than 90 per cent of the heads of the East Indian households which had changed their residence in Edmonton are married. This figure is similar to other East Indians in different Canadian cities (refer to chapter 2). However, a family is more likely to move than a single person in North American cities. From the Philadelphia-Treton area study, Fredland (1974) concludes that the never-married is less likely to move than the married. Rossi (1980) using the household composition to classify the sample movers of Philadelphia, finds only about one quarter of the total sample were single person households. So it can be stated, the presence of higher numbers of families among the East Indian movers in Edmonton corresponds to the general trend of North American cities.

The average length of marriage of the sample households is 10 years. This information is shown in Table 6.3. Length of marriage is more than 15.9 years for more than one fifth of the households and it is less than six years for 30.1 per

TABLE 6.3

LENGTH OF MARRIAGE OF EAST INDIAN MOVERS IN EDMONTON

Length of marriage (Years)	Number	Percentage of Total
Less than 2	14	10.8
2 - 3.9	8	6.2
4 - 5.9	17	13.1
6 - 7.9	18	13.8
8 - 9.9	10	7.7
10 - 11.9	14	10.8
12 - 13.9	8	6.2
14 - 15.9	13	10.0
16 and above	28	21.5
Total	130	100.0

Source : Questionnaire Survey.

University of Alberta

cent of the households. However, slightly more than half (51.6%) of the households were formed within the last decade. In North American cities, most of the moves made by a family take place within a decade after its formation (Rossi, 1980). This suggests that more than half of the East Indian movers in Edmonton are in those stages of their life-cycle when propensity to move is very high.

6.1.4 Household Size

The frequency distribution of the size of East Indian households which moved within Edmonton indicates that the average household size of the sample households is larger than the average of all households in Edmonton. The 1981 Census shows that the average size of a family in Edmonton is 3.1 persons. The average family size of the East Indian movers in Edmonton was 3.7 persons. Although the size of 25 per cent of the households is more than four, 37.5 per cent of the households had four people.

Table 6.4 indicates that the percentage of households increases with the household size. It reached its maximum percentage when the household size is four and decreases again as household size continues to increase. Therefore, it can be stated that of the East Indian movers, the very small and very large families are less likely to move than those which are medium in size. This is similar to Fredland's (1974) findings. The distribution pattern of the East Indian mover's household size is similar to the general movers in

TABLE 6.4

HOUSEHOLD SIZE OF THE EAST INDIAN MOVERS IN EDMONTON

Household size	Number	Percentage of total
1	7	4.6
2	22	14.5
3	28	18.4
4	57	37.5
5	28	18.4
6	6	3.9
7	3	2.0
8	1	0.7
Total	152	100.0

Source : Questionnaire Survey.

University of Alberta

Toronto and Philadelphia (Simmons and Baker,1974; and Rossi, 1980).

6.2 SOCIO-ECONOMIC CHARACTERISTICS

The purpose of this section is to present a descriptive analysis of some selected socio-economic characteristics of the East Indian movers in Edmonton. This is done because in addition to the demographic components of the life-cycle of households,a number of research findings suggest several other correlates of residential mobility. These are tenure status, type of occupied dwelling unit, occupational status and variables which are not easily classified. An analysis of these variables is the content of the study.

6.2.1 Tenure Status

Tenure status defines whether a respondent is a renter or an owner of the dwelling unit he occupies. Table 6.5 shows the tenure status of the East Indian movers before and after their move in Edmonton. It is determined from their status in the present and the previous dwelling unit. Seventy-eight per cent of the movers were renters before their move. After the move, only 29 per cent of the households are found to be renters. That is, more than 50 per cent of the renters became the owners of a dwelling unit. This suggests, the East Indian movers place a high priority on home ownership (refer to chapter 2). This is also mentioned by McCracken (1973) for all intra-urban

TABLE 6.5

TENURE STATUS OF THE EAST INDIAN MOVERS IN EDMONTON

Tenure status	Before move		After move	
	Number	Percentage	Number	Percentage
Owned	33	21.9	107	70.9
Rented	118	78.1	44	29.1
Total	151	100.0	151	100.0

Source : Questionnaire Survey.

University of Alberta

movements in Edmonton.

6.2.2 Dwelling Unit

Here concern is with the type of dwelling that the household occupies before and after the move. The dwelling units are classified into four different types. These are single detached house, condominium, duplex and apartment. About two-fifths (37.7%) of the East Indian apartment dwellers moved to another apartment. The remainder of them (62.3%) moved to some other type of dwelling unit. Before the move 45.4 per cent of the sample were living in an apartment, but this percentage decreased to 17.2 after the move (Table 6.6). Before the move 25.7 per cent of the movers were in single detached housing; after the move this figure increased to 67.5 per cent. That is, single detached housing dwellers increased by 260 per cent. However, apartment and condominium dwellers decreased by 270 and 220 per cent respectively. The number of movers residing in duplex dwellings did not change. This suggests that for the East Indian movers the propensity to move of an apartment dweller is comparatively higher than the dwellers in other housing types and that the highest preference is for single detached housing. Since this study is concerned exclusively with the movers, it partly confirms the findings of other researchers in that apartment dwellers are more likely to move more often than those who reside in other housing types. Therefore, from this evidence and the research

TABLE 6.6

TYPE OF DWELLING UNIT OCCUPIED BY THE EAST INDIAN MOVERS IN EDMONTON, BEFORE AND AFTER THE MOVE

Type of dwelling unit	Before the move		After the move	
	Number	Percentage	Number	Percentage
Single detached house	39	25.7	102	67.6
Apartment	69	45.4	26	17.2
Condominium	26	17.1	12	7.9
Duplex	9	5.9	9	5.9
Others	9	5.9	3	1.4
Total	152	100.0	152	100.0

Source : Questionnaire survey.

University of Alberta

reported in section one of this chapter, it can be stated that the East Indian movers are predominantly in the early stage of their life-cycle and that the migration flow is predominantly from apartment and condominium dwellings to single detached housing. Therefore, their movement pattern is towards the periphery of the city.

6.2.3 Occupational Status

The occupational status of the sample is based on the occupational classification of the "Immigration Statistics" indicated by the immigrants when they arrived in Canada (Statistics Canada, 1980). The occupational distribution of the East Indian respondents is shown in Table 6.7. The table indicates that a relatively high percentage (67.8%) of the heads of the households is in the managerial and professional occupations. A similar distribution has been noted in the literature on East Indians in Canadian cities. However, this is much higher than the 24.1 per cent of the employed population of Alberta in these categories in 1981 (Alberta Bureau of Statistics, 1982). The study on residential movement in Toronto also indicates high mobility rates for those people who are in professional and managerial occupations (Simmons and Baker, 1974). Aside from the professionals, a significant (10.1%) percentage of the East Indian movers are students and 9.7 per cent of the total respondents work as mechanics. A very low percentage of the heads of the East Indian households are involved with

TABLE 6.7

OCCUPATIONAL STATUS OF THE EAST INDIAN MOVERS IN EDMONTON

Occupational status*	Head of the household		Wife	
	Number	Percentage	Number	Percentage
Entrepreneurs	14	9.4	2	1.4
Managerial	12	8.1	3	2.1
Professional	75	50.3	23	16.3
Clerical	1	0.7	11	7.8
Sales	4	2.7	8	5.7
Service	1	0.7	6	4.3
Processing	1	0.7	6	4.3
Mechanic	14	9.4	3	2.1
Repairing	4	2.7	0	0.0
Transport	2	1.3	0	0.0
Labourer	6	4.0	0	0.0
Student	15	10.1	8	5.7
Housewife	0	0	71	50.3
Total	149	100.0	141	100.0

* This is condensed from the occupational classificati of the "Immigration Statistics", Statistics Canada.

$\chi^2 = 97.51$

Source : Questionnaire Survey.

University of Alberta

multifarious (which are not included in this occupational classification) occupations. This suggests that East Indian movers are predominantly professionals and this group has been shown to have a higher mobility rate than the other city dwellers.

The occupational distribution of the East Indian movers also demonstrates a distinct variation in terms of sex. A chi-square test was run to determine the significance of the variation in the occupational distribution patterns between heads and wives of households. The thirteen occupational categories (Table 6.7) were collapsed into six categories to overcome the restrictions of chi-square testing. It was found that there was a significant difference between the two distribution at the 0.01 level (X^2= 97.51 with 5 degrees of freedom). It is fairly obvious from Table 6.7 that only a few women are involved with non-professional occupation. It is found that all the heads of the households are employed. About fifty per cent (49.7%) of the female spouses is employed. It should be mentioned here that 55.8 per cent of the households have children within the age of 6 years (Table 6.2). This suggests that in order to raise small children, a high proportion of the female spouses of the East Indian mover households had to stay home. It might also mean they are financially secure. In the child-bearing and child-rearing stages of the life-cycle the female spouse of the household in North American cities usually stay at home to raise their children (Johnston, 1971). Therefore, it can

be stated that the East Indian movers in Edmonton are also predominantly in their child-bearing and child-rearing stages of the life-cycle.

6.2.4 Other Factors

In addition to the socio-economic characteristics which have been discussed in this chapter some other variables can also be correlated with the residential mobility of the East Indian movers. These variables are the length of residence and prior mobility in the city.

The literature on intra-urban migration says that, the mobility rate is comparatively higher for the newly arrived immigrants in the city as compared to the older established inhabitants, that is more people move soon after arriving in the city (Goodman, 1978). Table 6.8 depicts that 23.2 per cent of the respondents moved within one year of their arrival in the city and 51 per cent of them moved within two years of their arrival. As the number of years of length of stay increases the number of respondents who changed their residence decreases. Therefore, it would be expected that the mobility rates of the respondents would vary with their length of stay in the city. Thus, the years of residence in the city of those who have moved once will differ from the years of residence of those who have moved more than once. The chi-square test showed that this difference is significant at 0.01 level (X^2= 40.06 with 5 degrees of freedom). This supports the previous findings of higher

TABLE 6.8

CROSS TABULATION OF THE NUMBER OF MOVES MADE AND LENGTH OF STAY IN THE CITY AT THE TIME OF MOVE

Length of stay at the time of move (Year) / Times of move	>1	1	2	3	4	5	6	7	8	9	10	10>	Total
Once	26	16	7	9	5	1	2	0	0	1	0	0	67
Twice	7	6	3	5	10	4	1	0	2	0	0	2	40
Three times	1	3	4	1	1	5	2	0	1	1	0	3	22
More than Three times	1	0	3	0	2	1	3	4	0	0	0	8	22
Total	35	25	17	15	18	11	8	4	3	2	0	13	151

$X^2 = 40.06$

Source : Questionnaire Survey.

University of Alberta

mobility rates among the newly arrived immigrants than among the earlier established ones. Research has shown that prior mobility is strongly correlated with current mobility (Weinberg and Quigley, 1977). The Table 6.8 shows that for 44.4 per cent of the movers this was their first move and for 26.5 per cent this was their second move. About thirty per cent (29.1%) of the respondents changed their residence more than two times in the city. The table shows that as the number of moves increases the number of households moving decreases. Although more than half of the respondents (55.6%) had an earlier moving experience, it does not necessarily support a strong correlation between prior and current mobility of the East Indian movers in Edmonton.

The number of moves made by respondents is also related to their length of stay in the city. Table 6.8 indicates that when the length of stay was two years or less 73.1 per cent of the households changed their residence only once in the city. The equivalent percentage for those households who moved twice and had lived in Edmonton two years or less is 40 per cent. For those who moved three times it was 36.4 per cent and this percentage drops to 18.2 per cent for those who moved more than three times. Therefore, it can be stated that the number of moves increases the longer an East Indian household has lived in the city which confirms the research reported by Weinberg and Quigley (1977).

6.3 SUMMARY

There is a great deal of evidence to show that the most important determinants of intra-urban mobility are those demographic and socio-economic characteristics which are closely related to the life-cycle. This chapter has attempted to examine a number of selected demographic and socio-economic characteristics of the East Indian movers in Edmonton.

The demographic characteristics of these movers indicate that, like other movers in North American cities, East Indian movers are also young. They differ though, in respect of sex and marital status of the head of the households. Except for a few movers, all the households are headed by males and 90 per cent of them are married. More than half of them were married within the last decade. The average household size of the East Indian movers is larger than the average household size in Edmonton. Eighty-one per cent of the East Indian mover households had at least one child in the family. Among them, the majority of the households had children of less than 10 years.

The examination of the socio-economic characteristics of the East Indian movers showed that the majority were renters and lived in apartments before they moved. After the move, most of them became the owner of a single detached house. Previous research also suggested that renters are most mobile and most of the renters move with the intention of owning their own home. All the heads of the households

were employed but less than 50 per cent of the wives were employed. Among all the employed, the concentration is in managerial and professional occupations.

The majority of the migrants moved within two years of their arrival in the city. More than half of the sample movers have earlier moving experiences in the city. Even so, there is not a strong relationship between an earlier mobility experience and the number of moves. However, the number of moves is positively related to the length of stay in the city.

Taking these demographic and socio-economic components in combination it can be stated that, the East Indian movers in Edmonton are young. Almost all of them live in a family with children. The households are moderate in size and ownership aspirations are one of the important determinant factors in their migration decision. The major flow is from rented apartment dwellings to owned single family detached homes. All the men are employed but the majority of the women stay at home and look after their small children. With reference to the demographic and socio-economic characteristics of the East Indian movers in Edmonton, it can be tentatively stated that they are in the early stages of their life-cycle. Therefore it is anticipated that, like other intra-urban movers who are in the early stages of their life-cycle, East Indians also move in response to the demand for more living space which a single family detached home provides. This will be more fully eaxmined when the

data from the questionnaire schedule are analyzed.

7. THE REASONS FOR MOVING AND SELECTING A DESTINATION

This chapter is concerned with describing reasons why the East Indians moved and why they selected their particular destinations. In the literature the migration process is seen as a function of various "pushes" from the original dwelling and various "pulls" towards the new one discussed earlier. However, similarly to the demographic and socio-economic characteristics of the migrants, these "push" and "pull" factors also vary across the movers. The fundamental reason for relocation of a household is to adjust to its housing needs which is closely related to the household's stages of the life-cycle. The analysis of the reasons for moving and selecting the destination of a household will provide a better comprehension of the relationship between the household and the environment surrounding it. There is widespread agreement that the most pronounced reasons for moves and the selection of a destination in North American cities are closely related to the aspects of the life-cycle model. Therefore, this chapter will investigate the causes for the moves and the reasons for the selection of their destination by the East Indian movers in Edmonton with reference to some selected aspects related to the life-cycle model. Included will be an examination of the dwelling space, proximity to work and school, neighborhood characteristics and economic factors. The analytical technique followed for this analysis was

discussed in chapter 4 of this study.

Out of the 152 respondents, 145 answered the questions properly, that is indicated five factors (for each question) according to their importance. The remainder indicated just one or two or in some cases three factors only. Therefore these respondents will not be considered for the purpose of this analysis.

Hence, this chapter comprises three sections. The first two sections will describe the causal factors for the move and the factors influencing the choice of their destinations. A summation is made at the end of the chapter.

7.1 THE FACTORS CAUSING A CHANGE OF RESIDENCE

Following McCracken (1973), Lukomskyj (1974) and Rossi's(1980) research findings, an attempt is made here to examine the factors causing a change of residence of the East Indian movers in Edmonton. For the purpose of this study all the eleven hypothesized causal factors (referred to chapter 4) for the move are classified under six major headings and analyzed according to these. The factors of a change in income, too costly to maintain or pay rent and high mortgage rates are treated together as economic reasons. Wanting to be close to work and closer to the children's school, are treated as indications of wanting to be in proximity to work and school. No community members/friends/relatives in the neighborhood and difficult to get to other parts of the city are considered as

complaints about the neighborhood. Therefore, the six major causal factors are: i) dwelling space, ii) ownership aspirations, iii) proximity to work and children's school, iv) complaints about the neighborhood, v) economic reasons and vi) remaining factors.

7.1.1 Dwelling Space

The most important factor in causing the relocation of the East Indian households in Edmonton was shortage of dwelling space. Two out of every five respondents explained that shortage of dwelling space was the most important push factor for their move (Table 7.1). However, 90.3 per cent of the total respondents reported the shortage of dwelling space for the household as being one of the important reasons for their relocation. This finding is similar to findings on the movement of households in North American cities. According to the weighted value, about one quarter (24.3%) of the East Indian households in Edmonton changed their residence because of a shortage of dwelling space. From the above analysis it is ascertained that both in an absolute and a relative sense, shortage of dwelling space was the most important causal factor for the relocation of the East Indian households in Edmonton.

Information was also collected on the reasons for the shortage of the dwelling space. The respondents were asked an open-ended question, why the dwelling unit was too small for the household. The comments derived from the responses

TABLE 7.1

REASONS FOR MOVING FROM THE PREVIOUS RESIDENCE (ACCORDING TO THE IMPORTANCE OF THE FACTORS IN CAUSING MOVE)

	The Causal Factors for the Move	Total Response Total	%of Total	The Importance of the Factors V.V.Imp. (1) N1	5N1	V.Imp. (2) N2	4N2	Imp. (3) N3	3N3	L.Imp. (4) N4	2N4	N.Imp. (5) N5	1N5	Total Weigt. value (Nn)	% of total W.Val. (%ofNn)
1.	Dwelling Space	131	90.3	56	280	38	152	28	84	5	10	4	4	530	24.3
2.	Ownership Aspiration	123	84.4	42	210	34	136	25	75	19	38	3	3	462	21.3
a)	Wanted to be closer to children's School	73	50.3	8	40	15	60	12	36	18	36	20	20	192	8.8
b)	Wanted to be closer to Work	78	53.8	16	80	17	68	12	36	12	24	23	23	231	10.6
3.(a+b)	Proximity to Work and School	151	103.1	24	120	32	128	24	72	30	60	43	43	423	19.4
a)	Wanted to change the Neighborhood	60	41.4	4	20	7	28	10	30	23	46	14	14	138	6.3
b)	No Friends/Relatives Community members in the Neighborhood	42	29.0	2	10	6	24	15	45	9	18	10	10	107	4 9
c)	Bad accessibility characteristics of the Neighborhood	40	27.6	1	5	3	12	5	15	11	22	20	20	74	3.4
4.(a+b+c)	Complaint about the Neighborhood	140	98.0	7	35	16	64	30	90	43	86	44	44	319	14.7
a)	Change in income	59	40.6	2	10	7	28	15	45	20	40	15	15	138	6.3
b)	Costly to pay rent/ maintain	44	30.3	9	45	7	28	12	36	5	10	11	11	130	10.9
c)	High mortgage rate	9	6.2	0	0	4	16	2	6	2	4	1	1	27	1.2
5.(a+b+c)	Economic Reason	112	77.2	11	55	18	72	29	87	27	54	27	27	295	13 6
6.	Remaining Reasons	66	45.5	5	25	7	28	9	27	21	42	24	24	146	6.7
	Total	726		145		145		145		145		145		2175	100.0

Source: Questionnaire Survey

to this open-ended question are: increase in family members either by marriage, birth of a child or reunion of family from the home country; shortage of rooms; it was an apartment; not enough space for growing children and no privacy.

According to the reasons reported by the respondents, it can be said that, the majority of the households which complained about the dwelling space have experienced certain changes in their household structure. The change occurred either by an increase in their family size or a change in the age composition of the household structure, e.g. infant, pre-school children of a family reach school age. The predominant reasons were the shortage of rooms in the dwelling unit and a desire to move away from apartment living. Therefore, with reference to the discussion in chapter 3, it can be stated here that, these households predominantly are in the early stages of their life-cycle when their housing aspirations change as a result of an increase in the demand for more dwelling space. This prompts the move.

7.1.2 Ownership Aspirations

Second in importance in causing relocation of the sample households were ownership aspirations. The responses by the East Indian movers in Edmonton to the question on identifying the important causal factors for the move, strongly supports McCracken's (1973) research findings that

ownership aspirations are one of the most important reasons. For the sample as a whole, the desire to own a home was the second most important reason (mentioned by 84.4% of the respondents) for moving (Table 7.1). It is also supported by the data on the tenure status of the respondents before and after the move (referred to chapter 6). Before the move 21.9 per cent of the respondents were owners, but after the move 70.9 per cent owned their dwelling.

According to the weighted values the second most important causal factor for moving was the desire to own a home. This factor caused 21.7 per cent of total moves (Table 7.1). This supports Buchignani's (1980) statement that, the East Indians give high priority to home ownership.

7.1.3 Proximity to School and Work

Proximity to school and work was third in importance among the reasons for the relocation of the sample households. The desire to be closer to the children's school and to be closer to work were of more or less similar importance. One out of every two respondents explained their moves in terms of their desire to be closer to their children's school as well as their work. This response corresponds to Chadnay (1976) and Yasmin's (1982) conclusions that East Indians prefer to stay near their job place. Moreover, it can be stated that East Indians also place a high priority on the location of their children's school relative to where they live.

The weighted value of the causal factors shows that 8.8 and 10.6 per cent of the respondents relocated because they wanted to be closer to their children's school and closer to their work, respectively. However, the total weighted value of these multiple responses (19.4%) indicates that proximity to work and school was the third most important causal factor for the move of the sample households.

7.1.4 Complaints About the Neighborhood

Complaints about the neighborhood were fourth in importance in explaining the relocation of the East Indian movers in Edmonton. In response to the question in which the causal factors for the move were identified, 98.0 per cent of the respondents complained about the neighborhood. However, this was the most important reason for 4.8 per cent but was ranked fourth in importance by 29.7 per cent and fifth in importance by 30.3 per cent of the respondents. According to the weighted value, this factor explaining 14.7 per cent of the total moves. Although 41.1 per cent of the total respondents desired a change of neighborhood, this factor resulted in only 6.3 per cent of the total moves.

About one third (29%) of the respondents mentioned that they moved because they did not have any friends or community members in the neighborhood. However, this factor caused only 4.9 per cent of the total moves (Table 7.1). This finding shows the East Indians prefer to live near friends and other community members, but it does not

necessarily mean that the presence of friends or community members in the neighborhood is the most important factor in explaining their move.

Complaints about bad accessibility of the neighborhood were made by 27.6 per cent of the total respondents and caused 3.4 per cent of the total moves (Table 7.1). This shows that for the East Indian movers, accessibility characteristics were accorded little importance in the formulation of their decision to move.

7.1.5 Economic Reasons

The fifth most important causal factor for the move of the sample households relates to the economic condition of the mover. Of the total, 77.2 per cent of the respondents mentioned an aspect of their economic circumstances as one of the causal factors for their relocation. These factors appeared as the most important causal factor for 7.8 per cent of the respondents. However, according to the weighted value, these factors explained only 13.6 per cent of all the moves made by the respondents (Table 7.1). Because of the non-cooperative attitude of the respondents, specifically towards the questions on their financial condition, only a few economic factors were included in the questionnaire (referred to on page 91).

Among the economic resaons, a change in income seems the most frequently cited factor for relocation. About forty-one (40.6%) per cent of the total movers stated that a

change in income was one of the causal factors for their move. However, this factor explained only 6.3 per cent of all the moves (Table 7.1). "Too costly to pay rent or maintain the dwelling unit" was the second most often cited economic reason causing a move. This was one of the causal factors for relocation of 30.3 per cent of the East Indian movers in Edmonton and explained 10.9 per cent of the total moves (Table 7.1). High mortgage rates as a reason for a move was mentioned by only 6.2 per cent of the respondents. According to the weighted value, only 1.2 per cent of the total moves was explained by this factor.

More than three quarters of the respondents mentioned economic reasons as one of the causal factors for their relocation. However, it explained less than one eighth of the total moves. Therefore, it can be concluded that although economic reasons are one of the causal factors for the relocation of the East Indian households, these factors are not very important in causing their move.

7.1.6 Remaining Factors

Quite a large proportion (45.5%) of the sample stated some other reason as one of the causal factors for their relocation. It was first in importance as a "push" factor for 3.4 per cent and fifth in importance for 16.6 per cent of the respondents. The respondents were not asked to give their reasons, but seven of them provided reasons for their relocation. Among these, forced relocation, bad

neighborhood, a better house and rental accommodation were mentioned. According to the weighted value, about seven (6.7%) of the total moves were accounted for by one of these other factors. This suggests that most of the East Indians moved because of those reasons which were asked in the questionnaire. Since they moved because of those reasons, the causal factors for their move are closely related to the aspects of the life-cycle model. This is because these hypothesized causal factors were selected on the basis of this model. It is concluded, therefore, that the causal factors for relocation of the East Indian households in Edmonton are closely associated with their stages in the life-cycle.

7.2 REASONS FOR THE SELECTION OF THE DESTINATION

It would seem reasonable to expect that the reasons for selecting a destination would be similar to the causal factors for the relocation of a household. The literature, however, indicates that the factors influencing the choice of destination are not always related to the factors which cause the move (McCracken, 1973; Roseman and Williams, 1980; and Talarchek, 1982). For example, financial factors may not be important in causing the move, but they may be an important consideration in selecting a particular destination. The purpose of the second section of this chapter is to attempt to identify the factors which influence the choice of destination of the East Indian

movers in Edmonton. Similar to the earlier section, the variables which are included in the closed question as the reasons for selecting a destination are classified under six headings and analyzed according to their importance. They are: i) economic reasons, ii) dwelling space, iii) characteristics of the neighborhood, iv) proximity to work and school, v) new house and vi) other factors.

7.2.1 Economic Reasons

The most important reasons for the East Indian mover's selection of a destination in Edmonton were economic. In order to ascertain the influence of economic aspects in selecting the destination, it was decided to ask the respondents to consider some economic reasons. Because of their non-cooperative attitude, the respondents were asked to consider two economic factors only: whether the dwelling was within their economic capacity and the resale potential of the dwelling.

One out of every five respondents explained that the price of the dwelling unit was the most important reason in selecting their destination. However, this was one of the influential factors for the selection of a destination by 80.0 per cent of the respondents (Table 7.2). According to the weighted value, 17.7 per cent of the destinations were selected because of this reason. This suggests that price of the dwelling unit was one of the important reasons for the selection of the destination for the majority of the East

Indian movers in Edmonton. This is not to say that most of them had selected their destination because the price of the dwelling unit was within their economic capacity.

The factor "resale potential" accounted for 7.3 per cent of the total selection and was mentioned by 40.0 per cent of the movers (Table 7.2). This indicates that although the resale potential of a dwelling unit was considered by a significant proportion of the respondents, this factor does not have high importance in the selection of the destination.

The total weighted value indicates that economic reasons were the most influential factor for the East Indian movers in the selection of a destination in Edmonton. One quarter of the sample households selected their destinations because of these economic reasons. About 23 per cent (22.8%) of the respondents stated that economic aspects were the most important reason for the selection of the destination. This figure is a little higher than McCracken's finding. McCracken indicates that 21.9 per cent of the migrants in Edmonton indicated that some financial aspects had been their first consideration in evaluating their destination (McCracken, 1973: 74). Therefore, it is suggested that, East Indians, similar to other people, are also very much influenced by economic aspects in their selection of a destination in the city.

TABLE 7.2

REASONS FOR THE SELECTION OF THE DESTINATION (ACCORDING TO THE IMPORTANCE OF THE FACTORS INFLUENCING THE SELECTION OF A DESTINATION)

	Reasons for Selecting the Destination	Total Response Total	%of Total	The Importance of the Factors V.V.Imp. (1) N1	5N1	V.Imp. (2) N2	4N2	Imp. (3) N3	3N3	L.Imp. (4) N4	2N4	N.Imp. (5) N5	1N5	Total Weigt. Value (Nn)	% of total W.Val. (%of Nn)
a)	Within Economic capacity	116	80.0	28	140	32	128	22	66	17	34	17	17	385	17.7
b)	Resale Potential	58	40.0	5	25	13	52	12	36	18	36	10	10	159	7.3
1.(a+b)	Economic Reasons	174	120.0	33	165	45	180	34	102	35	70	27	27	544	25.0
2.	Dwelling Space	128	88.3	56	280	23	92	18	54	20	40	11	11	477	21.9
a)	Friends/Relatives Community members in the Neighborhood	51	35.2	5	25	7	28	6	18	16	32	17	17	120	5.5
b)	Good Neighborhood	87	60.0	5	25	14	56	29	87	24	48	15	15	231	10.6
c)	Good accessibility characteristics of the Neighborhood	53	36.6	2	10	2	8	12	36	13	26	25	25	105	4.8
3.(a+b+c)	Neighborhood Characteristics	192	131.7	12	60	23	92	47	141	53	106	57	57	456	21.0
a)	Closer to Work	65	44.8	19	95	15	60	10	30	8	16	13	13	214	9.8
b)	Closer to children's School	79	54.5	11	55	22	88	19	57	13	26	14	14	240	11.0
4.(a+b)	Proximity to Work and School	144	99.3	30	150	37	148	29	87	21	42	27	27	454	20.8
5.	New House	63	43.4	12	60	12	48	11	33	14	28	14	14	183	8.4
6.	Other Factors	24	16.6	2	10	5	20	6	18	2	4	9	9	63	2.8
	Total	725		145		145		145		145		145		2175	100.0

Source: Questionnaire Survey.

7.2.2 Dwelling Space

In an absolute sense and as a single factor, enough space for the household was the most frequently cited reason. When the value is weighted this reason is shown to be second in importance. Of the total, 88.3 per cent of the respondents indicated that enough dwelling space was one of the causal factors for the selection of their destination in Edmonton. However, this was considered as the most important reason for selection of a destination by 38.6 per cent of the respondents (Table 7.2). This figure is much higher than the 33.6 per cent for all intra-urban migrants in Edmonton to whom this factor was of prime importance in evaluating their destination in the city (McCracken, 1973: 94). This finding indicates that East Indian movers place more emphasis on dwelling space as compared to other intra-urban movers in Edmonton. This can be explained by the fact that the shortage of dwelling space was one of the causal factors for relocation for a higher percentage of East Indians (90.3%) than the other movers (40.7%, McCracken, 1973: 83) in the city. While 21.9 per cent of the total destinations were chosen because sufficient space was available for the household, 24.3 per cent of the total respondents moved because of shortage of dwelling space. It can be stated then, that the East Indian movers give high priority to sufficient dwelling space for their household.

7.2.3 Characteristics of the Neighborhood

Neighborhood characteristics were the third most important factor for selecting a destination by the East Indian movers. In this study characteristics of the neighborhood were identified by asking the respondents to consider the following factors: "Good neighborhood","relatives/friends/community members in the neighborhood" and "accessibility characteristics".

Three out of every five respondents (60%) indicated that a good neighborhood was one of the reasons why they selected their present dwelling. The presence of community members and good accessibility characteristics of the neighborhood were mentioned by 35.2 and 36.6 per cent respectively of the respondents. In discussion with each respondent a good social environment (social composition) was identified as the criterion of a good neighborhood by the majority of the respondents. This indicates that the East Indian movers give a higher priority to the social environment of the neighborhood than to the presence of other community members and its physical characteristics.

7.2.4 Proximity to Work and School

The next most important factor in selecting a destination was its proximity to work and the children's school. More than one fifth (20.8%) of the total respondents selected their present dwelling because it was either closer to the head of the household's work or to the children's

school. Closer to school showed more importance than proximity to work. More than half (54.5%) of the total respondents mentioned that closeness to the children's school was one of the major factors in their selection of a destination and this accounted for 11.0 per cent of the total (Table 7.2). This is because, more than half of the respondents have schoolgoing children (referred to in chapter 6) and they prefer to live very close to their children's school. However, the literature indicates that East Indians prefer to live near their job area (Chadnay, 1976; and Yasmin, 1982). According to the present research finding, it can be stated that the East Indian households in Edmonton with school going children place more emphasis on proximity to school than on proximity to work.

7.2.5 New House

New houses accounted for 8.4 per cent of the total selection and was mentioned by 43.4 per cent of the sample households (Table 7.2). Buchignani (1980) also noted that the East Indians preferred to buy a new house rather than a used one. A new house was considered as the most important reason for selection of a destination by 8.3 per cent of the total respondents.

It should be mentioned here that the factor "new house" is related to only those respondents who moved to a single home and more specifically those respondents who are the owners. As referred to in chapter 6, 70.9 per cent of the

total respondents were the owners of their present dwelling unit. Therefore, it is concluded that among the owners, more than 58 per cent of them bought a new house and it was one of the important factors in selecting their destination.

7.2.6 Other Factors

Only a few respondents (16.6%) mentioned some other factors (which were not included in the questionnaire) as influences on their choice of destination. As the respondents were not asked to specify the factors, it is not possible to identify precisely their true nature. However, some of the respondents mentioned their desire for good social characteristics of the neighborhood. It supports the earlier statement that East Indians place a high priority on the social environment of the neighborhood.

7.3 SUMMARY

Residential changes occur for many reasons. They serve a variety of purposes for different people. However, it is reasonably established that the household moves in order to satisfy its housing needs which vary at different stages of the life-cycle. This chapter has attempted to identify the causal factors for the relocation decision as well as those factors which are important in the selection of the destinations of the East Indian households in Edmonton. An affort was made to relate this to the life-cycle.

As the reasons for moving, four variables emerged as being particularly important in pushing out the households from their place of origin. In order of importance these variables were: 1) shortage of dwelling space; 2) desire to own a house; 3) proximity to work and school and 4) dissatisfaction with the neighborhood. Economic reasons were of low priority in the relocation decision.

A shortage of dwelling space caused about one quarter of the total moves. A change in household structure seemed the main reason for the shortage of dwelling space. More than one fifth of the respondents moved to become the owner of a dwelling unit. Wanting to be closer to a school and complaints about the neighborhood showed the presence of school-aged children in the family. The households are very much concerned about the social environment in which they were living and wanted to live.

The survey data indicated that in the selection of the destinations four variables were particularly important. In order of importance these were : 1) economic factors; 2) enough dwelling space for the household; 3) neighborhood characteristics and 4) proximity to work and school.

Economic reasons were of highest priority in selecting the destination. Although, dwelling space appeared the most important factor in causing the move, it is the second most important factor in selecting the destination. Neighborhood characteristics and proximity to school and work were more or less of equal importance. However, the availibility of

new houses also pulled the households towards their destination. With regard to neighborhood charactistics, households are very concerned about the social environment of the neighborhood. According to Johnston (1971), these households are in their early and middle stages of the life-cycle, when they become very sensitive to the social environment of the neighborhood, mainly because of its influence on rearing children.

The reasons for relocation as identified by the above analysis are closely related to the life-cycle model (referred to in chapter 3) Therefore, it can be stated that, the reasons for relocation of the East Indian households are also closely related to the life-cycle model. This relationship will be investigated further in the next chapter through, for example, cross tabulations among those variables which are closely related to the life-cycle. It is expected that the majority of the East Indian households changed their residence because of a change in housing aspirations which, in turn are, associated with a change in household structure.

8. RELATIONSHIP BETWEEN THE MOVE AND HOUSEHOLD STRUCTURE OF THE EAST INDIANS IN EDMONTON

As outlined in chapter three, the research problem of this thesis centres on the intra-urban residential migration of East Indian households in Edmonton with respect to aspects of their household structure (life-cycle). The analysis in the preceding chapters demonstrated that the flow of movement is predominantly away from the city centre. This is very similar to other intra-urban migration patterns in North American cities, usually caused by the increase in demand for dwelling space by each household. The demographic and socio-economic characteristics showed the predominance of young families with children under the age of ten years. A significant proportion of these had moved from a rented apartment to an owned home. These characteristics are the same as those movers who are in the early stages of their life-cycle when the household usually changes its structure very rapidly. As a result, the demand for dwelling space also changes and consequently the household changes its residence.

A shortage of dwelling space caused the majority of the moves. The social environment of the neighborhood and closeness to the school were considered as very important factors in the relocation decision of the East Indian movers in Edmonton. From the above findings it is suggested that the East Indian movers in Edmonton are predominantly in the early stages of their life-cycle when housing aspirations

change very rapidly, mostly because of rapid changes in the household structure. This chapter therefore will investigate the relationship between the intra-urban moves and change in household structure. The variables which will be examined are: the year of the move; the year in which the household was formed; the year of birth of the first child in the family; the year of birth of the last child in the family; and the year the female spouse (family) was reunited with the head of the household in Edmonton. These variables will be analyzed also in relation to the number of children in the family and the complaints about the dwelling space in the previous residence.

8.1 YEAR OF MOVE AND HOUSEHOLD FORMATION

The stages of the life-cycle of a household begins with its formation. People form, by marriage, a new household and leaving the parental household. So formation of the household initially is an important variable in causing the head of the household to change his residence. Since this study is concerned with the move of the heads of East Indian households in Edmonton, only those households which were formed in Edmonton, that is after the arrival of the head of the household in Edmonton, are considered here.

In order to investigate the relationship between the move and the formation of the household, the data on the year of marriage were compared with the year of the last move made by the respondents. Although 90.8 per cent (137)

of the total respondents were married, only 24.3 per cent (37) of them married after their arrival in Edmonton (Table 8.1). Table 8.1 also demonstrates the number of children in the family and number of complaints about the dwelling space. Except two, all households moved after they were formed. Of the total 89.2 per cent of these households moved within one decade of their formation. More than three quarters (75.7%) of them moved within five years and 37.8 per cent moved within one year of their formation. The presence of a high number of households formed for less than one decade[3] at the time of the move supports the notion that similar to the other movers, East Indian movers in Edmonton are predominantly in the early stages of their life-cycle.

However, about 50 per cent of these households have no children in the family. This is particularly true for those households which moved within one year of their formation. Only 50 per cent of them complained about the dwelling space. This suggests that at marriage the newly weds move to their new household and so commence a new stage in the life-cycle.

The literature shows that a household is likely to change its residence with the birth of a child. Table 8.1 indicates that, of the households which moved after two years of their formation most of them have children in their family. Table 8.1 also indicates that the majority of the

---

[3] This study is following Rossi. "Most of the moves made by a family take place within a decade after its formation" (Rossi, 1980:61).

TABLE 8.1

RELATIONSHIP BETWEEN THE YEAR OF MOVE AND FORMATION OF THE HOUSEHOLD

Moved Within (years) of formation of the Household	Number of households	H.H. without child	H.H. with one child	H.H. with two children	H.H. with more than two children	Complaint about the dwelling space
Before 2 years	1	1	0	0	0	1
Before 0-1 "	1	1	0	0	0	1
After 0-1 "	14	10	2	1	1	7
After 2-3 "	7	3	2	2	0	5
After 4-5 "	7	2	3	2	0	4
After 6-7 "	2	0	0	2	0	2
After 8-9 "	3	0	0	2	1	3
After 10 years	2	0	0	2	0	2
Total	37	17	7	11	2	25

Source: Questionnaire Survey.

University of Alberta

households mentioned that the shortage of dwelling space was one of the reasons for their relocation. About 70 per cent of these households had changed their residence more than twice in Edmonton (Appendix B). Therefore, it can be stated here that similar to the other movers in North American cities East Indians also move within a few years of household formation. The fact that most households are likely to increase their size very rapidly within a few years after their formation and consequently causes them to make intra-urban moves.

8.2 YEAR OF MOVE AND BIRTH OF THE FIRST CHILD OF THE FAMILY

The analysis in the first section of this chapter indicated that almost all the households moved within nine years of the households' formation and a significant proportion of them had children in the family at the time of the move. Therefore, it is expected that the birth of the first child in the family would be one of the important variables causing the change in the household structure and consequently causing a move. Since this study is concerned with intra-urban migration in Edmonton, only those households in which the first child was born in Edmonton are considered for the purpose of this analysis.

The relationship between the year of move and birth of the first child in the family is depicted in table 8.2. The table also indicates the number of children in the household and the number of households which complained about the

dwelling space. The table shows that the first child of only 46 households (30.3% of the total sample) were born in Edmonton. Among them 43 (93.5%) moved after the birth of the first child. Four made an intra-urban move before the birth of the first child. The majority of the total households (74.5%) moved within five years of the birth of the child. A significant number (20) of these households moved within one year of the birth of the child, that is right after the household experienced an increase in the household size. The rate of mobility decreased gradually in the following year (Table 8.2). This result does not correspond with Lukomskyj's (1974) research findings that the mobility rate of a household which is in the child-bearing stage, is very high in the first two years of the birth of a child and decreases gradually in the following years (Lukumskyj, 1974).

Of those households which moved within one year of the birth of the first child, a significant proportion (45%) of them have only one child in the family. Of those who moved after one year, most of them have at least two children in the family. The majority of these households had moved more than two times in Edmonton (Appendix B). Since only the last move made by the household is considered here, there is no information when the household made the other moves in Edmonton. However, it can be tentatively suggested without that information that these households would have moved after the birth of the first child and before the birth of

TABLE 8.2

RELATIONSHIP BETWEEN THE YEAR OF MOVE AND BIRTH OF FIRST CHILD IN THE FAMILY

Moved within (years) of the birth of the first child in the family	Number of Household	H.H. with one child	H.H. with two children	H.H. with more than two children	Complaint about the dwelling space
Before 4-5 years	1	0	0	1	1
Before 2-3 "	1	1	0	0	1
Before 0-1 "	2	1	0	1	2
After 0-1 "	20	9	8	3	16
After 2-3 "	10	3	5	2	10
After 4-5 "	5	2	1	2	5
After 6-7 "	2	0	1	1	2
After 8-9 "	2	0	1	1	1
After 10 "	3	0	1	2	2
Total	46	16	17	13	40

Source: Questionnaire Survey.

University of Alberta

their second child.

A new born baby in a family demands little space as compared to when the child starts to walk. This demand increases as the child gets older (change of age structure of the household) such as when the child starts to go to school. Thus, not only with an increase in household size but also with a change in the age structure of the household (life-cycle), the demand for dwelling space for the household also changes. Out of 46 households in which the first child was born in Edmonton, 40 (86.9%) households complained about the shortage of dwelling space. This demonstrates that a shortage of dwelling space was one of the important reasons for their relocation. Therefore, it is concluded that similarly to other movers, an increase in demand for dwelling space with a change of household structure (life-cycle) caused the East Indians to change their residence in the city.

8.3 YEAR OF MOVE AND BIRTH OF THE LAST CHILD OF THE FAMILY

From the analysis in the second section of this chapter, it was shown that, of those households which had children in the family the majority had more than one child at the time of their move. A significant proportion of them moved after 1 year of the birth of the first child. The majority of them moved more than two times in Edmonton and almost all of them complained about the shortage of dwelling space at the place of their origin. Therefore, it is

anticipated that the birth of the last child in the family causing a change in household structure, precipitates a move. This assumes they moved because of shortage of dwelling space. Similarly to the earlier analysis, only those households in which the last child was born in Edmonton will be considered.

The relationship between the change of household structure (in terms of the birth of the last child) and the intra-urban migration of the sample households is shown in Table 8.3. The table also illustrates the number of households with two and more children in the family as well as the number of households which complained about the shortage of dwelling space. Table 8.3 indicates that of the total sample, 54 are households (35.5% of the total) in which the child was born in Edmonton. Of the total(54), 25 (43.3%) households moved before the birth of the last child and 29 (53.7%) did the same after the birth of the child.

There were 35 (64.8%) households who had two children and 19 (35.2%) of them had more than two children in their families at the time of the move. Out of the 25 households who moved before the birth of the last child, 11 of them had more than two children in the family and 21 of them changed their residence two times since their arrival in Edmonton (Appendix B). Twenty households moved within 0-3 years before the birth of the last child. Therefore, it can be stated that those households which changed their residence before the birth of the last child had moved to a dwelling

TABLE 8.3

RELATIONSHIP BETWEEN THE YEAR OF MOVE AND BIRTH OF THE LAST CHILD IN THE FAMILY

Moved within (years) of the birth of the last child in the family	Number of Household	H.H. with two children	H.H. with more that two children	Complaint about the dwelling space
Before 6-7 years	2	2	0	2
Before 4-5 "	3	1	2	3
Before 2-3 "	14	7	7	13
Before 0-1 "	6	4	2	6
After 0-1 "	15	13	2	12
After 2-3 "	7	4	3	6
After 4-5 "	2	0	2	2
After 6-7 "	3	3	0	3
After 8 years	2	1	1	2
Total	54	35	19	49

Source: Questionnaire Survey.

University of Alberta

unit with enough space for the household even after the birth of another child. In most of the cases these households had their last child within three years of their move. Since 90.7 per cent of these households complained about the shortage of dwelling space of their earlier residence in Edmonton, it is suggested that these households moved to a bigger house with the birth of their earlier child and planned to have enough space which would be needed by the household after having another child at a later date.

Table 8.3 demonstrates that, 29 (53.7%) households moved after the birth of the last child. Twenty four (86.2%) of them moved within five years of the birth of the child. This figure is much higher than Lukomskyj's (1974) reaserch findings for the child-bearing households in Edmonton. Lukomskyj showed that 52 per cent of those households in which a child was born within the first six months of 1966, moved within five years of the birth of the child (Lukomskyj, 1974: 16). This can be explained by the fact that, irrespective of the stages of the life-cycle, the population of the minority communities are more mobile than the host population (Butler, Kaiser and McAllister, 1971). Therefore, it can be stated that with a change of household structure, the East Indians show a higher propensity to move than the general urban populace.

Table 8.3 demonstrates that fifteen (51.7%) households moved within one year and seven (25.5%) households moved within 2-3 years of the birth if the last child. This

indicates that the mobility rate is high in the first year and drops suddenly in the second year and remains more or less constant for the succeeding years. Lukomskyj states that the first two years have high and similar rates of mobility, third and fourth years have medium and the fifth year has a low rate of mobility (Lukomskyj, 1974:18). It is suggested here that with the experience of a change in the household structure (in terms of birth of the last child), East Indians change their residence within a shorter period than other movers in Edmonton.

Of those households moving after the birth of the last child, the majority (72.4%) of them have two children in the family. A shortage of dwelling space was one of the important causal factors for the relocation of 90 per cent of these households. From the above analysis it is concluded here that similar to the other city movers, East Indians also change their residence with a change in household structure.

8.4 YEAR OF MOVE AND ARRIVAL OF FEMALE SPOUSE IN EDMONTON

The literature states that the male member of an East Indian household usually arrives first and the female spouse, sometimes the family, joins him at a later date (Yasmin, 1982). The reuniting of the spouse (family) in Edmonton can be considered then as one of the variables causing a change in household structure. Since this study is concerned with the move of the head of East Indian

households, only those households in which the head arrived earlier and the spouse joined him later in Edmonton are considered for the purpose of this analysis.

As with the formation of the household, the time the spouse was reunited in Edmonton is also positively related to the time of move of the household. Table 8.4 indicates that the spouse of 33 households joined the head in Edmonton at a later date. The majority of them (66.7%) moved within three years and almost all of them moved within nine years of the reunion. Of these 33 households, at the time of the reunion only five (15.2%) of them had children in their family and most (90%) of them moved within three years of their reunion in Edmonton. Among those households (12) who moved within one year, only one of them experienced an increase in household size with the birth of a child in Edmonton. However, 66.7 per cent of them complained about the dwelling space in their previous residence. This suggests that irrespective of the number of people involved, these households moved due to an increase in household size through a spouse's arrival in Edmonton.

Among those households who moved after one year of the arrival of the spouse, all of them had children at the time of move. More than 80 per cent of these stated that a shortage of dwelling space was one of the important reasons for their relocation. However, the time of the last move made by these households is always (with a few exceptions) within one decade of the time the spouse (family) was

TABLE 8.4

RELATIONSHIP BETWEEN THE YEAR OF MOVE AND REUNION OF SPOUSE (FAMILY) IN EDMONTON

Moved within (years) of reuniting the family in Edmonton	Number of House-holds	No. Children in the family at the time of reuniting			No. Children in the family at the time of move				Complaint about the dwelling space
		H.H. with no child	H.H. with one child	H.H. with two children	H.H. with no child	H.H. with one child	H.H. with two children	H.H. with more than two children	
0 - 1 yrs	12	9	1	2	8	2	2	0	8
2 - 3 "	10	9	0	1	0	2	8	0	6
4 - 5 "	4	4	0	0	0	1	3	0	4
6 - 7 "	2	1	0	1	0	0	2	0	2
8 - 9 "	2	2	0	0	0	0	1	1	2
10 and above	3	3	0	0	0	0	2	1	3
Total	33	28	1	4	8	5	18	2	25

Source: Questionnaire Survey.

University of Alberta

reunited in Edmonton. As this study is concerned with the last move only, it is not known when these households made their earlier moves in Edmonton. If the reunion of a spouse in Edmonton can be considered as one sort of formation (a reformation) of the household then following Rossi (1980), it can be concluded that East Indian households in Edmonton are within the early stage of their life-cycle . At this stage they experience the greatest increase in their household size. The increase in size causes a move.

8.5 SUMMARY

As other research findings on intra-urban migration in North American cities have shown, East Indians change their residence with a change of household structure. This chapter has attempted to identify the relationship between the move and a change of household structure of the East Indian movers in Edmonton.

The majority of the households moved within one decade of their formation. Of those who moved within one year of the formation, a significant proportion of these households do not have any children. However, most of the households with children moved one year after the formation.

Except for a few, almost all the households moved after the birth of the first child in the family. The majority of them moved within five years of the birth of the first child and the highest mobility occurred in the first year. A significant proportion of the households moved before the

birth of the last child in the family and about 50 per cent of them had more than two children in the family at the time of the move. Almost all of them complained about the dwelling space in their previous residence in Edmonton.

Family reunification was associated with a significant number of moves. Of those households which were reunited in Edmonton, almost all of them moved within nine years of their reunion. The majority of the childless couples moved within one year of their reunion. From this analysis it is shown that the East Indians do not differ greatly from other movers in the city, as previous research indicates. East Indians also change their residence with a change of household structure. They do so with an increase in the size of the household.

9. CONCLUSION

The main objective of this research work was to investigate the intra-urban residential migration of East Indian households in Edmonton with reference to some aspects of the life-cycle model. Chapter five through eight presented an analysis and interpretation of the spatial pattern of the moves, i.e. where the households moved; who moved, i.e. the demographic and socio-economic characteristics of the movers; why the households moved i.e. the reasons of their moving and selecting their destinations; and finally the relationship between the move and change of their household structure. This final chapter attempts to discuss the findings in a more comprehensive way to ascertain whether the intra-urban migration pattern of the East Indian households relates to the life-cycle model or not. In the first part of this chapter individual interpretations and conclusions of the preceding work are brought together in a summary of the principal findings. Finally, on the basis of the research findings some suggestions are made on how to conduct future research work on the intra-urban migration of this minority community.

9.1 WHERE DID THEY MOVE?

One of the principal findings of this study was that the most visible migration flow of East Indian movers is outwards from the city centre. This is very similar to other

intra-urban migration patterns in North American cities, mostly caused by the increase of demand for dwelling space as well as by the ownership aspirations of each household. A very high percentage of the East Indians moved towards the peripherial suburbs of the city. This is much higher than the moves associated with the total population of Edmonton as shown by McCracken's research (McCracken, 1973). However, it is noticeable that, the flow of East Indian households predominately is towards those suburbs which are newly developed residential areas where the number of the total housing stock is relatively higher and housing is comparatively cheaper than the other suburbs.

The flow pattern as shown in chapter five, demonstated that at the time of arrival, the majority of the East Indians settled in the inner part of the city and after some time they moved outwards from the central area. The majority of the households moved a moderate distance (3-6 Kms) from their former residence. This is much higher than the average distance of move for the total population moving in Edmonton as again shown by McCracken.

The flow pattern also showed that although the average distance of move is comparatively higher than the general populace, the East Indians tended to relocate in nearby peripherial suburbs. For example, it is more likely that the moves which originated from the southern part would terminate in the peripherial suburbs of the southern part of the city and moves originating in the northern part would

terminate in the northern peripherial suburbs of the city. That is, they prefer to move to those neighborhoods which are known to them. The majority of the East Indians moved after the development of different suburban residential areas at the periphery of the city. On the whole, it can be stated here that although the flow pattern of the East Indian households is similar to the other city dwellers, it differs with respect to the distance moved.

9.2 WHO MOVED?

The analysis of the demographic characteristics including age, sex, marital status and household size demonstrated that a significant proportion of the East Indian mover households are moderate in size (2-4 persons), composed of adults in their late twenties or older (26-40 years) and children under the age of ten years. By following the literature (referred to in chappter 3), it can be stated that these households are in the child-bearing and child-rearing stages of their life-cycles. The socio-economic characteristics (tenure status,type of occupied dwelling unit and occupational status) as discussed in chapter six, showed that the majority of the East Indian movers were renters and lived in apartments before they moved. After the move, most of them became the owners of a single detached house. Those migrants who have arrived in the city recently (within last two years) are the most mobile.

In chapter six, it was shown that almost all the East Indian households are headed by males and 90 per cent of them are married. The majority of them were married within the last decade. The average household size of the East Indian movers, 3.7 persons, is larger than the average household size in Edmonton, 3.1 persons. More than 80 per cent of the households have children in their family. All the heads of the households were employed and the concentration is in managerial and professional occupations. However, the majority of the women stay at home to look after the children.

It is in this context that young, renter households with infant children in the family and of moderate economic status (with respect to occupation) are of most likely to make an intra-urban move. From the literature on intra-urban migration in North American cities it can be stated that these households are in the most critical period of their life-cycle when a change in housing aspirations is produced by a change of household structure.

9.3 WHY DID THEY MOVE?

The present study has strongly demonstrated the causal factors for the relocation of the East Indian households. These were shown to be closely associated with housing aspirations. The housing aspirations include the desire for more dwelling space, the desire to purchase a home, wanting to be closer to school and work and a desire to change

neighborhoods. The economic reasons showed the least importance in causing relocation.

The findings in chapter seven strongly supported the earlier statement (see page 145) that the East Indian households are in the most critical period of their lives with reference to changes in housing aspirations and changes in household structure. A change in household structure was the main reason for the shortage of dwelling space. This was one of the important push factors isolated by the study and caused about one quarter of the total moves. More than 80 per cent of the respondents mentioned ownership aspirations as one of the push factors and it was the most important causal factor for 28 per cent of the movers. In terms of the weighted value ownership aspirations caused more than one fifth of the total moves. According to the weighted value preference for proximity to school and work caused 19.4 per cent and complaints about the neighborhood caused about 15 per cent of the total moves. This is the outcome of changes to the East Indians' housing aspirations.

The analysis in chapter seven indicated that although shortage of dwelling space was the most important reason causing the move, economic reasons were the most important in the selection of a destination. One quarter of all the respondents selected their destinations because of some economic reason. These include the cost of the dwelling, it was within the economic capacity of the mover and it had resale potential. These motives are similar to other movers

in Edmonton as McCracken has shown. The price of the dwelling unit was mentioned by 80 per cent of the respondents and about one fifth of the total destinations were selected because of this factor. This finding explains to some extent why the majority of the East Indian movers were pulled towards those peripherial residential areas where house prices are comparatively lower than other suburbs of the city. However, most of them were pushed out from their previous dwelling by a change in their housing aspirations which are allied to a change in their household structure.

Apart from the economic reasons, the other important pull factors were more or less similar to the push factors, mentioned earlier. Enough dwelling space as one of the important pull factors was mentioned by 88 per cent of the movers and 22 per cent of the total destinations were selected because of this reason. The analysis also demonstrated that these households are very much concerned about the social environment of the neighborhood (demographic and socio-economic characteristics of the households in the neighborhood). This shows that these households are in their early and middle stages of their life-cycles with a young head of the household and school-going children for whom a safe and good (to the household) social environment is desirable.

9.4 RELATIONSHIP BETWEEN THE MOVE AND CHANGE OF HOUSEHOLD STRUCTURE (LIFE-CYCLE)

The analysis in chapter eight proved the presence of a linkage between the change in residence of these respondents and a change in their household structure. Almost all the households moved within nine years and more than 75 per cent moved within five years, of the formation. This result corresponds with Rossi's(1980) research findings for North American households. Almost all the households moved with an increase in household size brought about by the birth of a child in the family. Only the first and last child's birth were examined and the associated moves related to them. The mobility rate was found to be very high in the first year of the birth of the child. This is much higher than the sample of all child-bearing households in Edmonton examined by Lukomskyj (1974). The higher mobility rate here demonstrated that with the change of household structure, the East Indians change their residence more quickly than other people. As the majority of the respondents were renters who place a very high priority on home ownership, with any sort of change in household structure they respond very quickly. As a result they change their residence within a very short time. Additionally, almost all the households moved within nine years and about 80 per cent of them moved within five years of the reunion with their spouses in Edmonton. Therefore, it is concluded here that like other city dwellers, East Indians respond quickly to the change of

life-cycle.

The present study has demonstrated that the intra-urban migration pattern of East Indian movers in Edmonton is closely related to their stages of the life-cycle. Regarding the impact of the life-cycle model on intra-urban migration of East Indians, a number of hypotheses (as mentioned in chapter 3 :86) were tested. The results indicated that all the hypotheses were supported except for those dealing with economic aspects and distance of move. These weak relationships between the economic aspects and mobility pattern can be attributed to the fact that occupational status alone is not sufficient to explain economic status and the data do not provide the information on the economic condition of the respondents. The variation of the distance of move can be explained by the great impact of housing opportunities in some selected residential areas of the city.

The present study has demonstrated that compared to the other city dwellers, East Indians give more priority to home ownership. To any sort of change in the life-cycle, East Indians respond more quickly than the other city dwellers. The conclusion of this study is that the intra-urban migration of the East Indian household is strongly associated with their life-cycles and therefore the life-cycle model is a valuable framework for analyzing their migration patterns.

9.5 SUGGESTIONS FOR FUTURE RESEARCH

The present study illustrated that in order to understand the complexity of the intra-urban mobility pattern of the East Indian households, a number of different variables must be examined in detail in different empirical studies. The findings made here lead to the development of certain suggestions for areas of future research on the intra-urban mobility pattern of the East Indian households in Edmonton. These suggestions may also be applicable to other minority communities in Edmonton and other Canadian cities. They are given below:

1. The present investigation on intra-urban residential migration of the East Indian households indicates a significant association between the move and a change in housing aspirations which is related to the change of household structure. This finding corresponds with the general trend in North American cities.

2. In this study closed questions were used to measure the association between selected variables (which were associated with the life-cycle model) and mobility patterns. By adopting this particular approach this study overlooked some additional variables which also might have some impact on the mobility pattern of the East Indian households. For future research it is suggested that open-ended questions about the pull and push factors would bring out some additional variables which would be particularly important for this community and different from the general

populace.For example, arrival of non-nuclear family members from the home country also might be a push factor and responsible for their moves.

3. The variables which were found to account for the change in housing aspirations have been measured only crudely. Only those variables which are closely associated with the change of household structure were considered for the purpose of this study. This feature of the study design made it possible to measure the impact of certain important causal variables in a general way. Future research might try to refine the measurements and intensive analysis of each of these variables might provide a better understanding of the complex process of intra-urban migration of this community in Canadian cities.

4. The literature indicates that economic status is closely associated with housing aspirations as well as the mobility pattern of North American city dwellers. Unfortunately, in this study, it was not possible to consider this variable fully in the analysis because of the non-cooperative attitude of the respondents. It is suggested here that, future research should make a positive attempt to identify the economic status of the East Indian households and correlate this with their housing aspirations and then their mobility patterns.

5. The evidence of this study indicated that the East Indians prefer to buy a new house rather than a used one. This study did not provide information either on why these

people prefer to buy a new house or, among them, who prefers such accommodation. Whether it is a particular sub-group or all of the East Indians should be specified. It is hoped that future research will give more attention to this aspect as it forms an important variable among the housing aspirations of this community.

6. This study did not consider the household's residential features it specifically wishes to obtain by relocating. It did not examine how they search for a dwelling to match their particular requirements and what sources of information on vacant dwellings were used. Future research might make a more detailed study of these aspects to identify housing aspirations, their preferences and future mobility inclinations.

7. The population which this research studied was restricted by the fact that only those who had changed their residence in Edmonton were examined. This feature of the study design made it possible to make, to some extent, an intensive study of the crucial characteristics of the movers. At the same time it restricted the generality of the findings, in that how the movers differ from the non-movers was not examined. An essential task is to broaden the generality of these findings by studying more population irrespective of whether they are movers or non-movers.

8. The move which was considered for the study was only the last one irrespective of the time of move. This aspect of the study made it possible to make an intensive study of

the pattern and isolate the important factors causing a particular move. At the same time it was restricted to examining the rate of mobility of the East Indians for a specific time period. In order to understand the rate of mobility for this community, it is necessary to consider the moves with respect to some specific time period. For example moves within the last three or four years.

9. The experience from the questionnaire survey indicates that, the mobility pattern varies with the variation of the mover's immigration status as well as length of stay in the city. This is particularly appropriate for the East Indian Canadian citizens who have been in Edmonton for a long time, or some cases in other North American cities (familiar to the North American cities), in contrast to new immigrants who arrived very recently from the home country or those who are on student visas and wish to stay in Edmonton for a short period of time. It is hoped that future research will give more attention to these aspects as they have a significant impact on the total mobility pattern of this community.

10. Finally, the variation of the mobility pattern as noted above could, of course, vary with the mover's country of origin and/or sub-ethnic community (e.g. Sikh, Malayalam, or Tamil communities). A migration study emphasizing the country of origin/sub-ethnic community would provide the intra-ethnic variation of the mobility pattern of the East Indian households in Canadian cities.

BIBLIOGRAPHY

Abu-Lughood, J. and M. M. Foley. 1960. "Consumer Strategies," in N. N. Foote *et al.*,*Housing Choices and Housing Conatraints*. New York, McGraw Hill, pp. 71-274.

Alberta Bureau of Statistics, 1982. Edmonton. Government of Alberta.

Angus, H. F. 1970. "People of East Indian Origin", in *Encyclopedia Canadian*. Vol. 3, pp. 331-332.

Awan, S. N. 1980. "The People of Pakistani Origin in Canada, Their First Twenty-five Years", in Ujimoto, K. V. and G. Hirabayashi, *Visible Minorities and Multiculturalism: Asians in Canada*. Toronto, Butterworth, pp. 243-246.

Babbie, E. R. 1975. *The Practice of Social Research*. Belmont. Wadsworth.

Balakrishnan, T. R. 1976. "Ethnic Residential Segregation in the Metropolitan Areas of Canada", *The Canadian Journal of Sociology*. Vol. 1, No. 4, Winter, pp. 481-498.

Bible, D. S. and L. A. Brown. 1980. "A Spatial View of Intra-urban Migration Search Behavior", *Socio-Economic Plan Science*. Vol. 14, pp. 19-23.

Bowerman, J. K. 1980. "East Indians in Alberta: A Human Rights Viewpoint", in Ujimoto, K. V. and G. Hirabayashi, *Visible Minorities and Multiculturalism: Asians in Canada*. Toronto, Butterworth, pp. 181-192.

Brown, H. J. 1975. "Changes in Workplace and Residential Location", *Journal of The American Institute of Planners*. Vol. 41, January, pp. 32-39.

Buchignani, N. L. 1977. "A Review of the Historical and Sociological Literature on East Indians in Canada", *Canadian Ethnic Studies*. Vol. IX (1), pp. 86-108.

Buchignani, N. L. 1979. "South Asian Canadians and the Ethnic Mosiac: An Overview", *Canadian Ethnic Studies*. Vol. XI (1), pp. 48-68.

Buchignani, N. L. 1980. "Accommodation, Adaptation, and Policy: Dimensions of the South Asian Experience in Canada", in Ujimoto, K. V. and G. Hirabayashi, *Visible Minorities and Multiculturalism: Asians in Canada*. Toronto, Butterworth, pp. 121-150.

Burgess, E. W. 1925. "The Growth of the City: An Introduction to a Research Project", in Park, R. E. *et al.* (ed) *The City*. Chicago, University of Chicago Press, pp. 47-62.

Burke, C. D. and Ireland, 1976. "An Urban/ Economic Development Strategy for the Atlantic Region", *Urban Prospect*. Ministry of States Urban Affairs, Canada.

Butler, E. W., Kaiser, E. J. and J. M. Mcallister, 1971. "Residential Mobility of Blacks and Whites: A National Longitudinal Survey." *American Journal of Sociology*. Vol. 77 No. 3 Nov. pp. 445-456.

Caldwell, J. and P. Caldwell, 1977. *The Population of Tropical Africa*. Longman, London.

Canadian Urban Trends, 1976. *National Perspective* Toronto. Copp Clark Publishing, a division of Copp Clark Limited, Toronto, in association with the Ministry of States for Urban Affairs and Printing and Publishing, Supply and Services Canada. Vol. 1.

Cassin, M. 1977. *Class and Ethnicity; The Social Organization of working Class East Indian Immigrants in Vancouver*. University of British Columbia.

The Census of British Columbia, 1906. Vancouver. Dominion Bureau of Statistics. Canada.

The Census of Canada, 1971-1981. Ottawa. Statistics Canada.

The Census of India, 1971.New Delhi. Registrar and Census Commisioner, India.

Chadnay, J. G. 1976. *The Vancouver Sikhs, An Ethnic Community in Canada*. Ph.D. Thesis, Michigan State University.

The City of Edmonton, 1981. Status of Residential Land in the City of Edmonton, December, 31, 1981.

Clark, W. A. V. 1980." Residential Mobility and neighborhood Change: Some Implication For Racial Residential Segregation", *Urban Geography* 1, 2, pp. 95-107.

Colby, C.C. 1959. "Centrifugal and Centripetal Forces in Urban Geography" in Mayer, H.M. and Kohn, C.F.(ed) *Readings in Urban Geography*. Chicago. The University of Chicago Press. pp. 287-298.

Davies, O. and P. Knight. 1978." An Analysis of Residential Location Pattern in the Kingston Metropolitan Area", *Social and Economic Studies*. Vol. 27(4) pp. 403-433.

Davies, W. K. D. 1978. "A Social Taxonomy of Edmonton Community Area in 1971,in Smith,P.J.(ed) *Edmonton The Emerging Metropolitan Pattern, Western Geographical Series* Vol. 15 pp. 161-195.

D'Costa, R. 1977." Recent Asian Immigrants to Canada," in Wakil, S. P.(ed.) *South Asian Perspective and Dimensions.* Canadian Association for South Asian Studies. pp. 165-178.

DeJong, G. F. and J. T. Fawcett, 1981. "Motivation for Migration: An Assesment and a Value Expectancy Research Model," in DeJong, G. F. and R. W. Gardner (ed.) *Migration Decision Making, Multidiciplinary Approaches to Microlevel Studies in Developed and Developing Countries.* New York. Pergamon Policy Studies pp. 13-58.

DeJong, G. F. and R. W. Gardner, 1981. *Migration Decision Making, Multidiciplinary Approaches to Microlevel Studies in Developed and Developing Countries.* New York. Pergamon Policy Studies.

Edmonton General Plan, 1979. A Citizen's Preview, *The City of Edmonton.* Planning, February, 1979.

Fairbairn, K. J. 1978. "Location Changes of Edmonton's High Status Residents 1937-72, in Smith. P.J.(ed) *Edmonton, The Emerging Metropolitan Pattern, Western Geographical Series.* Vol. 15 pp. 199-229.

Foote, N. N. *et al* , 1960. *Housing Choices and Constraints.* New York. McGraw Hill. 453 pp.

Fredland, D. R. 1974. *Residential Mobility and Home Purchase.* Lexington, MA: Lexington.

Freedman, R. 1967. " City Migration", in Burges and Bogue, *Urban Ecology* pp. 92-114.

Gertler, L. and R. Crowley, 1977. *Changing Canadian Cities The next 25 years.* Toronto. McClelland and Stewart Limited.

Glick, P. C. 1957. *American Families.* Census Monograph Series, New York.John Willey and Sons.

Goodman, J. L. 1978. *Urban Residential Mobility, Places,People and Policy.* Washington D.C.The Urban Institute.

Golledge, R. G. and L. J. King, 1978. *Cities, Space and Behavior, The Elements of Urban Geography.* Englewood Cliff, New Jersey. Prentice-Hall Inc.

Gordon, I. and R. Vickerman, 1982. "Opportunity, Preference and Constraint: An Approach to the Analysis of Metropolitan Migration," *Urban Studies*. 19. pp. 247-261.

Hawley, A. 1971. *Urban Society*.New york. Ronald Press.

Herbert, D. 1973. *Urban Geography, A Social Perspective*. Newton. David and Charles.

Husaini, Z. 1981. *Social Network in Immigrant's Economic Success*. Ph. D. Thesis, Department of Sociology, University of Alberta.

Immigration Statistics Canada, 1956-80. Ottawa-Hull. Immigration and Demographic Policy Employment and Immigration Canada.

Johnston, R. J. 1971. *Urban Residential Patterns*. London.Bell and Sons Ltd.

Jones, F. L. 1967. "Ethnic Concentration and Assimilation : An Australian Case Study. *Social Forces*. 45. pp. 412-423.

Jones. H. R. 1981. *A Population Geography*.London.Harper and Row, Publisher.

Kennedy, L. W. 1979. "Social interaction and The Desire to Move," *Edmonton Area Series Report*. No. 13 Population Research Laboratory, Department of Sociology, University of Alberta.

Lansing, B. J. and L. Kish, 1957. "Family Cycle as an Independent Variable." *American Sociological Review*. October No. 5. pp. 512-519.

Larson L. E. 1979. *Family Pattern and Services in Edmonton*. University of Alberta.

Lebourgeois, J. P. R. 1981. *The Effect of the Millwoods Land Bank on Land and Housing Prices in Edmonton*. M. A. Thesis, Department of Geography, University of Alberta.

Lukomskyj, O. 1974. *Household Structure and Intra-urban Mobility*. M. A. Thesis, Department of Geography, University of Alberta.

Maisel, S. J. 1966. "Rates of Ownership, Mobility and Purchase," *Essays in Urban Land Economics*, University of California Press.

Marston, W.G. 1969. "Social Class Segregation Within Ethnic Groups in Toronto", *Canadian Review of Sociology and*

Anthropology. 6 pp. 65-79.

Matwijiw, P. 1979. "Ethnicity and Urban Residence: Winnipeg, 1941-71. *Canadian Geographer*. XXIII. 1. pp. 45-61.

McCracken, K. W. J. 1973. *Intra-urban Migration In Edmonton*. Ph. D. Thesis, Department of Geography, University of Alberta.

McCracken, K. W. J. 1975. "Household Awareness Spaces and Intra-urban Migration Search Behavior", *Professional Geographer*. Vol. XXVII No. 2 May pp. 166-170.

Moore, E. G. 1972. "Residential Mobility in the City" *Commission on College Geography Research Paper*. No. 13. Association of American Geographer, Washington, D. C.

Morrison, P.A. 1977. "The Functions and Dynamics of the Migration Process". in Brown.A. and Neuberger.E.(ed), *Internal Migration: A comparative Perspective*. New York. Academic Press.

Moser, C. A. and G. Kalton, 1971. *Survey Methods in Social Investigation*. Second Edition, Heinemann, Educational Books Limited. London.

Nizamuddin, K. 1976. *Some Behavioral Characteristics of Migrants From India and Pakistan in Windsor, Ontario, Canada*. Ph. D. thesis, University of Windsor.

Northam. R. M. 1975. *Urban Geography* New York.John Wiley and Sons Inc.

Pannu, R. S. 1966. *A Sociological Survey of Teachers From Indian Teaching in Alberta, 1958-1965*. M. A. Dessertation, Education Department, University of Alberta.

Pereira, C. P. 1971. *East Indians In Winnipeg*. M. A. Thesis, University of Manitoba, Winnipeg.

Pryor, R. J. 1976. "Conceptualising Migration Behavior, A Problem in Micro-demographic Analysis,"in Kosinski, L. A. and J. W. Webb.(ed) *Population at Microscale*. New Zealand Geographical Society, pp. 105-120.

Richmond, A. 1967. *Post War Immigrants in Canada*. Toronto. University of Toronto Press.

Richmond, A. 1974. "Aspects of the Absorption and Adaptation of Immigrants." *Department of Manpower and Immigration*. Ottawa.

Roseman, C. C. and J. D. Williams, 1980. "Metropolitan to

Non-metropolitan Migration: A Decision Making Perspective." *Urban Geography* 1, 4, pp. 283-294.

Rossi. P. H. 1980. *Why Families Move*. Preface by Clark, W. A. V. 2nd Edition. Beverly Hills. Sage Publications.

Royal Trust Survey of Canadian House Prices, October, 1983.

Saran. P. and P. J. Leonhard-Spark, 1980."The Indian Immigrants in America, A Demographic Profile," in Saran, p. and E. Eames (ed) *The New Ethnics, Asian Indians in The United States*. Special Studies. pp. 130-162.

Short. J. R. 1978. "Residential Mobility," *Progress in Human Geography*. vol. 2 No. 3 Oct. PP. 419-447

Siddique, C. 1977. "Structural Separation and Family Change: An Exploratory Study of the Immigrants, Indian and Pakistani Community of Saskatoon, Canada," *International Review of Modern Sociology*. Vol. VII No. 1 pp. 13-35.

Simmons, J. W. 1968. "Changing in City: A review of Intraurban Mobility." *The Geographical Review*. Vol. LVII October, No. 4. pp. 622-651.

Simmons, J. W. 1974. *Urban Canada* Second Edition. Toronto. Copp Clark Publishing.

Simmons, J. W. and A. M. Baker, 1974. *Patterns of Residential Movement in Metropolitan Toronto*. University of Toronto, Department of geography, Research Publications.

Smith M. W. 1944. "Sikh Settlers in Canda," *Asia and The America*. 44(8) pp. 359-364.

Smith, P.J. and L. D. McCann, 1981. "Residential Land Use Change in Inner Edmonton," *Annals of the Association of American Geographers*. Vol. 71 No. 4 December pp. 536-551.

Talarchek. G. H. 1982. "Sequential Aspects of Residential Search and Selection," *Urban Geography*. Vol. 3 No. 1 PP. 34-57.

Weinberg. D. H. 1979. "The Determinants of Intra-urban Household Mobility," *Regional Science and Urban Economics* Vol. 9(2-3) pp. 219-246.

Weinberg. D. H. and J. M. Quigley, 1977. "Intra-urban Residential Mobility: A review and Synthesis," *International Regional Science Review*. Vol. 2 No. 1 pp. 41-66.

Willis, K. G. 1974. *Problems in Migration Analysis.* Lexington, Mass: Lexington Books.

Wolpert, J. 1965. "Behavioral Aspects of the Decision to Migrate," *Regional Science Association.* Vol. 15 pp. 159-169.

Yasmin, M. 1982. *Ethnic Identity Retention of the Bangladeshi Immigrants in the Totronto CMA.* M. A. Thesis, Department of Sociology, University of Guelph.

APPENDIX-A

RESIDENTIAL MOBILITY STUDY OF

EAST INDIAN PEOPLE IN EDMONTON

Please answer the following questions about your length of stay and characteristics of dwelling units you are now living and have lived in, in Edmonton.

1. How long have you been permanently at this address in Edmonton? Year_____ Month_____

2. Where did you last live?
   1. In Edmonton _____
   2. Not in Edmonton _____

3. How many times have you changed your address in Edmonton
   1. Once _____
   2. Twice _____
   3. Three times _____
   4. More than three times_____

4. Please give details about present and past dwelling units in Edmonton. (Start with the present one)

	Address	Type * H/A/C/D/O	Tenure Owned/ Rented	Year of arrival
1.				
2.				
3.				
4.				
5.				

* H = Single Detached House
A = Apartment
C = Condominium
D = Duplex
O = Others

University of Alberta

5. How important were the following factors in causing you to leave your previous residence? (Put a number according to the importance of any five of them i.e. 1 for the most important one, and 5 for the least important one.)

1. Place too small for the household* _____
2. Change in income _____
3. Want to be close to work _____
4. No community members in the neighborhood _____
5. Wanted to change the neighborhooh _____
6. Too costly to maintain or pay rent _____
7. High mortgage rate _____
8. Wanted to be closer to children's school _____
9. Desire to own a house _____
10. Difficult to get to other parts of the city _____
11. Others _____

* Why it was too small for the household?

1. _____
2. _____
3. _____
4. _____
5. _____

University of Alberta

6. How important were the following factors in choosing your new dwelling unit? (Put a number according to the importance of any five of them i. e. 1 for the most important one, and 5 for the least important one).

1. Enough space for the household ____
2. Closer to working place ____
3. Relatives/friends/community members in the neighborhood ____
4. Within economic capacity ____
5. Near school for the children ____
6. Good neighborhood ____
7. New house ____
8. Resale potential ____
9. Good accessibility to other parts of the city ____
10. Others ____

Now I would like to ask you some questions about your household and your home.

7. Are you married?

1. Yes ____
2. No ____

8. If yes, when did you get married?

1. Year ____
2. Month ____

University of Alberta

9. When was your first child born?

.1. Year _____
2. Month _____

10. When was your last child born?

1. Year _____
2. Month _____

11. What is the household size (or family), give detail about it (including the respondent)

No	Sex M/F	Age (year)	Relation with head of the household	Present occupation	Occupation in last year	Year of arrival in Edmon
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						

1. Canadian citizen _____
2. Immigrant _____
3. Hope to become Canadian citizen _____
4. Not decided _____
5. Other _____
6. Don't know _____

13. Were you born in:-

1. India _____
2. Bangladesh _____
3. Pakistan _____
4. Srilanka _____

University of Alberta

APPENDIX B

YEAR OF MOVE AND YEAR OF GETTING MARRIED, BIRTH OF FIRST CHILD, BIRTH OF LAST CHILD, ARRIVAL OF HEAD IN EDMONTON, ARRIVAL OF FEMALE SPOUSE IN EDMONTON, COMPLAINT ABOUT THE DWELLING SPACE AND HOUSEHOLD SIZE OF EACH OF THE RESPONDENTS.

Serial no	Marriage	Birth of first child in the family	Birth of last child in the family	Arrival of head in Edmonton	Arrival of female spouse in Edmonton	Complaint about dwelling space	Household size
1	Ma+10	Fca+08	Lca+2	A13	W+10	S3	4
2	Ma+03	Fca+02		A03	W+03	S3	3
3	Mb+23	Fcb+22	Lcb+16	A06	W+00	S1	4
4	Mb+06	Fcb+02	Lca+01	A03	W+02		4
5				A00		S5	1
6	Ma+00			A03		S3	3
7	Mb+11	Fcb+09	Lcb+04	A03	W+03	S2	4
8	Mb+12	Fcb+10	Lcb+05	A04	W+04	S3	4
9	Mb+08	Fcb+07	Lca+03	A03	W+03	S2	4
10	Ma+04	Fca+02		A05	W+03		3
11	Mb+11	Fca+06	Lca+03	A11	W+10	S2	5
12	Mb+08	Fca+05		A08	W+08		3
13	Mb+09	Fcb+07	Lca-02	A06	W+06	S1	5
14				A00		S5	1
15	Ma+05	Fca+01	Lca-06	A06	W+05	S1	4
16	Mb+05	Fcb+03		A00	W+00	S1	3
17	Mb+10	Fcb+07	Lcb+04	A00	W+00	S3	4
18	Mb+14	Fcb+13	Lca+02	A04	W+04	S2	5
19	Ma+01			A02	W+01	S2	2
20	Ma+01	Fca+00	Lca-04	A03		S3	5
21	Mb+11	Fcb+10	Lca-03	A01	W+01	S3	4
22	Mb+21	Fcb+16	Lcb+03	A01	W+01		6
23	Mb+17	Fca+12	Lca+05	A14	W+14	S2	5
24	Ma+02	Fca+00	Lca+01	A04	W+02	S2	4
25	Ma+09	Fca+08	Lca-02	A11		S2	5
26	Ma-06			A00		S5	2
27	Mb+17	Fcb+11	Lcb+05	A01	W+17	S1	5
28	Mb+18	Fca+16	Lca+11	A17	W+17	S2	5
29		Fcb+09	Lca+01	A01	W+01	S3	4
30	Ma+07	Fca-04	Lca-06	A08	W+07	S2	4
31	Mb+28			A16	W+16	S2	2
32	Mb+10	Fcb+09	Lca+06	A06	W+06	S2	4
33	Mb+15	Fcb+14	Lcb+00	A00	W+00	S3	3
34	Mb+04	Fcb+02	Lca-02	A00	W+00	S3	4
35	Ma+08	Fcs+05	Lca+00	A13	W+08	S1	5
36	Ma+05	Fca+03	Lca+01	A06	W+03		4
37	Mb+00	Fca-01		A00	W+00	S1	5
38		Fcb+10	Lcb+04	A00	W+00	S4	5
39	Ma+01			A03	W+01		2
40	Ma+06	Fca+04	Lca+02	A07	W+05	S1	4

41	Ma+16	Fca+15	Lca+07	A22	W+16	S3	4
42	Mb+04	Fca+00		A00	W+03	S1	3
43	Mb+09	Fcb+08	Lca+07	A07	W+07	S4	4
44	Mb+04	Fcb+03		A00	W+00	S3	3
45	Mb+03	Fca+02	Lca-05	A02	W+02	S2	5
46	Mb+01	Fca+01	Lca-03	A01	W+01	S2	4
47				A00		S2	1
48	Mb+33	Fcb+32	Lcb+22	A18	W+18		2
49	Ma+08	Fca+06	Lca+00	A08	W+08	S1	4
50	Mb+10	Fcb+06	Lca+01	A02	W+02	S3	4
51	Mb+06	Fca+01	Lca-02	A02	W+02	S1	4
52	Mb+18	Fcb+17	Lcb+13	A02	W+02	S2	4
53	Mb+15	Fcb+13	Lcb+05	A02	W+00	S2	4
54	Mb+01			A00	W+00	S1	2
55	Mb+01			A00		S2	1
56	Mb+16	Fcb+14	Lcb+06	A05	W+05	S4	4
57	Mb+04	Fca+00		A02	W+02	S2	3
58	Mb+11	Fcb+05	Lca-01	A00	W+00	S1	4
59	Ma+05	Fca+01		A09	W+09	S2	3
60	Mb+11	Fcb+07	Lcb+05	A01	W+01	S2	4
61	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	S1	5
62	Mb+09	Fcb+07		A04	W+04	S1	3
63	Mb+06	Fca+03	Lca+01	A04	W+04	S1	4
64				A00		S3	2
65	Mb+13	Fcb+11	Lca+04	A04	W+04	S1	5
66	Mb+12	Fcb+11	Lcb+07	A00	W+00	S3	4
67	Ma+00			A02	W+00	S3	2
68	Mb+13	Fcb+11	Lcb+10	A00	W+00	S3	5
69	Mb+09	Fcb+08	Lca+01	A07	W+06	S3	5
70	Mb+09	Fcb+08	Lca+01	A07	W+06	S1	4
71	Mb+03			A01	W+01	S3	2
72	Mb+05	Fcb+03	Lca-01	A01	W+01	S2	4
73	Mb+17	Fca+01		A05	W+05		3
74	Mb+05	Fca+01	Lca-02	A05	W+03	S3	4
75	Mb+11	Fcb+10	Lcb+05	A00	W+00	S1	5
76	Mb+09	Fcb+08	Lcb+06	A04	W+04	S1	4
77	Mb+08	Fcb+07	Lcb+01	A00	W+00	S1	4
78	Mb+05	Fcb+03	Lca+01	A02	W+02	S1	4
79	Ma+05	Fca+00		A06	W+05	S3	3
80	Mb+06	Fcb+05	Lca-01	A00	W+00	S1	5
81	Mb+05	Fcb+02	Lca+01	A04	W+04	S1	4
82	Mb+10	Fcb+04		A04	W+04	S4	3
83	Mb+09	Fcb+08	Lca-04	A00	W+00	S1	4
84	Mb+18	Fcb+17	Lcb+13	A04	W+04	S2	4
85				A11		S1	1
86	Ma+04	Fca+02	Lca-01	A06	W+03		5
87	Ma+00			A02	W+00		2
88	Mb+07	Fcb+03	Lca-02	A00	W+00	S1	5
89	Mb+02	Fca+01		A01	W+01	S1	3
90	Mb+18	Fcb+15	Lcb+04	A02	W+02	S1	5
91	Ma+00			A01	W+01	S1	6
92	Ma+03	Fca+00		A08	W+03		4

93	Mb+03	Fca+01	Lca-01	A03	W+03	S1	7
94	Mb+30	Fcb+28	Lcb+18	A01	W+00	S1	4
95				A00			6
96				A00		S5	3
97	Mb+11	Fcb+03	Lca+01	A03	W+03	S2	4
98	Mb+18	Fcb+16	Lcb+09	A04	W+04	S1	5
99	Ma+02	Fca+00	Lca-02	A03	W+02	S1	8
100				A03		S1	4
101	Ma+01	Fca+00		A03		S3	3
102				A01		S1	2
103	Ma+02			A01	W+00	S3	2
104	Mb+13	Fcb+09	Lca+09	A01	W+01	S2	4
105	Mb+09	Fca-02		A06	W+06	S1	3
106	M +11	Fc +07	Lc +00				4
107	Mb+03			A01	W+01		2
108	Mb+10	Fcb+08	Lcb+07	A01	W+01	S3	6
109	Ma+01	Fca+00	Lca-03	A02	W+01	S1	4
110	Mb+15	Fcb+14	Lca+10	A11	W+11	S3	4
111	Mb+03	Fca+00		A02	W+02	S1	3
112	Ma+01			A05	W+00	S2	2
113	Mb+04	Fcb+03		A01	W+01	S1	7
114	Mb+20	Fcb+18	Lcb+15	A00	W+00	S2	4
115				A00			1
116	Mb+11	Fcb+09	Lcb+05	A00	W+00	S1	4
117	Mb+22	Fcb+21	Lcb+12	A02	W+02	S1	4
118				A01		S4	1
119	Mb+08	Fca+05	Lca-03	A07	W+07	S2	5
120	Mb+06	Fcb+03		A01	W+01	S2	3
121	Mb+04			A01	W+00	S1	2
122	Mb+01			A01	W+00	S1	2
123				A02			2
124	Mb+09			A00	W+00	S2	2
125	Mb+06	Fca+03	Lca+03	A05	W+05	S3	4
126	Ma+05	Fca+04		A09	W+05	S2	3
127	Mb+13	Fcb+12		A05	W+05	S1	3
128	Mb+10	Fcb+08	Lcb+06	A02	W+02	S1	4
129	Ma+00			A00	W+00	S2	2
130				A00			1
131	Mb+07	Fcb+04		A00	W+00	S1	3
132	Mb+01			A00	W+00	S1	2
133	Mb+09	Fcb+06	Lca+01	A05	W+05	S1	4
134	Mb+40	Fcb+31	Lcb+25	A13	W+13	S1	6
135	Ma-01			A01	W-02	S2	2
136	Mb+05	Fca+03	Lca-03	A04	W+03	S3	4
137	Mb+07	Fca+02		A03	W+03	S2	3
138	Mb+07	Fcb+05	Lcb+03	A03	W+02	S2	4
139	Ma+03	Fca-01		A04	W+08	S1	3
140	Mb+04	Fca+01		A04	W+04	S2	3
141	Ma+01			A00	W+00	S3	6
142	Mb+03	Fcb+02		A00	W+00	S2	3

143	Ma+04	Fca+02	Lca-01	A05	W+04	S2	4
144	Mb+10	Fcb+05	Lca+03	A04	W+04		2
145	Mb+06			A05	W+05		2
146	Mb+12	Fcb+10	Lcb+08	A01	W+04	S1	5
147	Mb+12	Fcb+18	Lcb+08	A01	W+01		6
148	Mb+07	Fcb+06	Lca-03	A02	W+02		6
149	Mb+06	Fca+01	Lca-01	A01	W+01	S1	4
150	Mb+13	Fcb+12	Lcb+07	A04	W+04		4
151				A00	W+04	S1	2
152	Ma+00			A01	W+01	S1	1

Note: Ma= Married after coming in Edmonton. Fca= Birth of first child after coming in Edmonton.

Mb= Married before " " " Fcb= Birth " " " before " " "

+x= Moved after x years of marriage. +x= Movedafter x years of the birth of the child.

-x= Moved before" " " " -x= Movedbefore " " " " " " " "

Ax= Moved after xyears of arrival H.H. Lca= Birth of last child after coming in edmonton.

W+x = Moved " " " " Spouse Lcb= Birth " " " before " " "

-x = Moved before " " " " +x= Movedafter x years of the birth of the child.

S1,2,3,4,5 = Complaint about the dwelling space. -x= Movedbefore" " " " " " " "

Source: Questionnaire Survey.